

**Standard Industrial Classification (SIC) Codes**  
**Reportable Under the Massachusetts Toxics Use Reduction Act (4 - Digit)**

**Appendix A**

SIC	SIC CODE DESCRIPTION		
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<b>10</b>	<b>Metal Mining</b>		
1011	Iron ores	2022	Cheese, natural and processed
1021	Copper ores	2023	Dry, condensed, evaporated products
1031	Lead and zinc ores	2024	Ice cream and frozen desserts
1041	Gold ores	2026	Fluid milk
1044	Silver ores	2032	Canned specialties
1061	Ferroalloy ores, except vanadium	2033	Canned fruits and vegetables
1081	Metal mining services	2034	Dehydrated fruits, vegetables, soups
1094	Uranium-radium-vanadium ores	2035	Pickles, sauces, and salad dressings
1099	Metal Mining	2037	Frozen fruits and vegetables
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<b>12</b>	<b>Coal Mining</b>	2038	Frozen specialties, nec
1221	Bituminous coal and lignite--surface	2041	Flour and other grain mill products
1222	Bituminous coal--underground	2043	Cereal breakfast foods
1231	Anthracite mining	2044	Rice milling
1241	Coal mining services	2045	Prepared flour mixes and doughs
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<b>13</b>	<b>Oil and Extraction Gas</b>	2046	Wet corn milling
1311	Crude petroleum and natural gas	2047	Dog and cat food
1321	Natural gas liquids	2048	Prepared feeds, nec
1381	Drilling oil and gas wells	2051	Bread, cake, and related products
1382	Oil and gas exploration services	2052	Cookies and crackers
1389	Oil and gas field services, nec	2053	Frozen bakery products, except bread
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<b>14</b>	<b>Non metallic Minerals, Except Fuels</b>	2061	Raw cane sugar
1411	Dimension stone	2062	Cane sugar refining
1422	Crushed and broken limestone	2063	Beet sugar
1423	Crushed and broken granite	2064	Candy & other confectionery products
1429	Crushed and broken stone, nec	2066	Chocolate & cocoa products
1442	Construction sand and gravel	2067	Chewing gum
1446	Industrial sand	2068	Salted & roasted nuts & seeds
1455	Kaolin and ball clay	2074	Cottonseed oil mills
1459	Clay and related minerals, nec	2075	Soybean oil mills
1474	Potash, soda, and borate minerals	2076	Vegetable oil mills, nec
1475	Phosphate rock	2077	Animal and marine fats and oils
1479	Chemical and fertilizer mining, nec	2079	Edible fats and oils, nec
1481	Nonmetallic minerals services	2082	Malt beverages
1499	Miscellaneous nonmetallic minerals	2083	Malt
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<b>20</b>	<b>Food and Kindred Products</b>	2084	Wines, brandy, and brandy spirits
2011	Meat packing plants	2085	Distilled and blended liquors
2013	Sausages and other prepared meats	2086	Bottled and canned soft drinks
2015	Poultry slaughtering and processing	2087	Flavoring extracts and syrups, nec
2021	Creamery butter	2091	Canned and cured fish and seafoods
		2092	Fresh or frozen prepared fish
		2095	Roasted coffee
		2096	Potato chips and similar snacks
		2097	Manufactured ice
		2098	Macaroni and spaghetti
		2099	Food preparations, nec
		<hr/>	
		<b>21</b>	<b>Tobacco Products</b>
		2111	Cigarettes
		2121	Cigars
		2131	Chewing and smoking tobacco
		2141	Tobacco stemming and redrying

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**22 Textile Mill Products**

2211 Broadwoven fabric mills, cotton  
 2221 Broadwoven fabric mills, manmade  
 2231 Broadwoven fabric mills, wool  
 2241 Narrow fabric mills  
 2251 Women's hosiery, except socks  
 2252 Hosiery, nec  
 2253 Knit outerwear mills  
 2254 Knit underwear mills  
 2257 Weft knit fabric mills  
 2258 Lace and warp knit fabric mills  
 2259 Knitting mills, nec  
 2261 Finishing plants, cotton  
 2262 Finishing plants, manmade  
 2269 Finishing plants, nec  
 2273 Carpets and rugs  
 2281 Yarn spinning mills  
 2282 Throwing and winding mills  
 2284 Thread mills  
 2295 Coated fabrics, not rubberized  
 2296 Tire cord and fabrics  
 2297 Nonwoven fabrics  
 2298 Cordage and twine  
 2299 Textile goods, nec

**23 Apparel and Other Textile Products**

2311 Men's & boys' suits & coats  
 2321 Men's & boys' shirts  
 2322 Men's & boys' underwear & nightwear  
 2323 Men's & boys' neckwear  
 2325 Men's & boys' trousers & slacks  
 2326 Men's & boys' work clothing  
 2329 Men's & boys' clothing, nec  
 2331 Women's & misses' blouses & shirts  
 2335 Women's, & misses' dresses  
 2337 Women's & misses' suits and coats  
 2339 Women's & misses' outerwear, nec  
 2341 Women's and children's underwear  
 2342 Bras, girdles, and allied garments  
 2353 Hats, caps, and millinery  
 2361 Girls' & children's dresses, blouses  
 2369 Girls' & children's outerwear, nec  
 2371 Fur goods  
 2381 Fabric dress and work gloves  
 2384 Robes and dressing gowns  
 2385 Waterproof outerwear  
 2386 Leather and sheep-lined clothing  
 2387 Apparel belts  
 2389 Apparel and accessories, nec  
 2391 Curtains and draperies  
 2392 Housefurnishings, nec  
 2393 Textile bags  
 2394 Canvas and related products

2395 Pleating and stitching  
 2396 Automotive and apparel trimmings  
 2397 Schiffl machine embroideries  
 2399 Fabricated textile products, nec

**24 Lumber and Wood Products**

2411 Logging  
 2421 Sawmills & planing mills, general  
 2426 Hardwood dimension & flooring mills  
 2429 Special product sawmills, nec  
 2431 Millwork  
 2434 Wood kitchen cabinets  
 2435 Hardwood veneer and plywood  
 2436 Softwood veneer and plywood  
 2439 Structural wood members, nec  
 2441 Nailed wood boxes and shook  
 2448 Wood pallets and skids  
 2449 Wood containers, nec  
 2451 Mobile homes  
 2452 Prefabricated wood buildings  
 2491 Wood preserving  
 2493 Reconstituted wood products  
 2499 Wood products, nec

**25 Furniture and Fixtures**

2511 Wood household furniture  
 2512 Upholstered household furniture  
 2514 Metal household furniture  
 2515 Mattresses and bedsprings  
 2517 Wood TV and radio cabinets  
 2519 Household furniture, nec  
 2521 Wood office furniture  
 2522 Office furniture, except wood  
 2531 Public building & related furniture  
 2541 Wood partitions and fixtures  
 2542 Partitions and fixtures, except wood  
 2591 Drapery hardware, blinds and shades  
 2599 Furniture and fixtures, nec

**26 Paper and Allied Products**

2611 Pulp mills  
 2621 Paper mills  
 2631 Paperboard mills  
 2652 Setup paperboard boxes  
 2653 Corrugated & solid fiber boxes  
 2655 Fiber cans, drums & similar products  
 2656 Sanitary food containers  
 2657 Folding paperboard boxes  
 2671 Paper coated & laminated, packaging  
 2672 Paper coated & laminated, nec  
 2673 Bags: plastics, laminated, & coated

**Standard Industrial Classification (SIC) Codes**  
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2674 Bags: uncoated paper & multiwall  
 2675 Die-cut paper & board  
 2676 Sanitary paper products  
 2677 Envelopes  
 2678 Stationery products  
 2679 Converted paper products, nec

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**27 Printing and Publishing**

2711 Newspapers  
 2721 Periodicals  
 2731 Book publishing  
 2732 Book printing  
 2741 Miscellaneous publishing  
 2752 Commercial printing, lithographic  
 2754 Commercial printing, gravure  
 2759 Commercial printing, nec  
 2761 Manifold business forms  
 2771 Greeting cards  
 2782 Blankbooks and looseleaf binders  
 2789 Bookbinding and related work  
 2791 Typesetting  
 2796 Platemaking services

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**28 Chemicals and Allied Products**

2812 Alkalies and chlorine  
 2813 Industrial gases  
 2816 Inorganic pigments  
 2819 Industrial inorganic chemicals, nec  
 2821 Plastics materials and resins  
 2822 Synthetic rubber  
 2823 Cellulosic manmade fibers  
 2824 Organic fibers, noncellulosic  
 2833 Medicinals and botanicals  
 2834 Pharmaceutical preparations  
 2835 Diagnostic substances  
 2836 Biological products exc. diagnostic  
 2841 Soap and other detergents  
 2842 Polishes and sanitation goods  
 2843 Surface active agents  
 2844 Toilet preparations  
 2851 Paints and allied products  
 2861 Gum and wood chemicals  
 2865 Cyclic crudes and intermediates  
 2869 Industrial organic chemicals, nec  
 2873 Nitrogenous fertilizers  
 2874 Phosphatic fertilizers  
 2875 Fertilizers, mixing only  
 2879 Agricultural chemicals, nec  
 2891 Adhesives and sealants  
 2892 Explosives  
 2893 Printing ink  
 2895 Carbon black  
 2899 Chemical preparations, nec

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**29 Petroleum and Coal Products**

2911 Petroleum refining  
 2951 Asphalt paving mixtures and blocks  
 2952 Asphalt felts and coatings  
 2992 Lubricating oils and greases  
 2999 Petroleum and coal products, nec

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**30 Rubber and Misc. Plastics Products**

3011 Tires and inner tubes  
 3021 Rubber and plastics footwear  
 3052 Rubber & plastics hose & belting  
 3053 Gaskets, packing & sealing devices  
 3061 Mechanical rubber goods  
 3069 Fabricated rubber products, nec  
 3081 Unsupported plastics film & sheet  
 3082 Unsupported plastics profile shapes  
 3083 Laminated plastics plate & sheet  
 3084 Plastics pipe  
 3085 Plastics bottles  
 3086 Plastics foam products  
 3087 Custom compound purchased resins  
 3088 Plastics plumbing fixtures  
 3089 Plastics products, nec

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**31 Leather and Leather Products**

3111 Leather tanning and finishing  
 3131 Footwear cut stock  
 3142 House slippers  
 3143 Men's footwear, except athletic  
 3144 Women's footwear, except athletic  
 3149 Footwear, except rubber, nec  
 3151 Leather gloves and mittens  
 3161 Luggage  
 3171 Women's handbags and purses  
 3172 Personal leather goods, nec  
 3199 Leather goods, nec

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**32 Stone, Clay, and Glass Products**

3211 Flat glass  
 3221 Glass containers  
 3229 Pressed and blown glass, nec  
 3231 Products of purchased glass  
 3241 Cement, hydraulic  
 3251 Brick and structural clay tile  
 3253 Ceramic wall and floor tile  
 3255 Clay refractories  
 3259 Structural clay products, nec

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3261 Vitreous plumbing fixtures  
 3262 Vitreous china table & kitchenware  
 3263 Semivitreous table & kitchenware  
 3264 Porcelain electrical supplies  
 3269 Pottery products, nec  
 3271 Concrete block and brick  
 3272 Concrete products, nec  
 3273 Ready-mixed concrete  
 3274 Lime  
 3275 Gypsum products  
 3281 Cut stone and stone products  
 3291 Abrasive products  
 3292 Asbestos products  
 3295 Minerals, ground or treated  
 3296 Mineral wool  
 3297 Nonclay refractories  
 3299 Nonmetallic mineral products, nec

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### **33 Primary Metal Industries**

3312 Blast furnaces and steel mills  
 3313 Electrometallurgical products  
 3315 Steel wire and related products  
 3316 Cold finishing of steel shapes  
 3317 Steel pipe and tubes  
 3321 Gray and ductile iron foundries  
 3322 Malleable iron foundries  
 3324 Steel investment foundries  
 3325 Steel foundries, nec  
 3331 Primary copper  
 3334 Primary aluminum  
 3339 Primary nonferrous metals, nec  
 3341 Secondary nonferrous metals  
 3351 Copper rolling & drawing  
 3353 Aluminum sheet, plate, and foil  
 3354 Aluminum extruded products  
 3355 Aluminum rolling & drawing, nec  
 3356 Nonferrous rolling & drawing, nec  
 3357 Nonferrous wiredrawing & insulating  
 3363 Aluminum die-castings  
 3364 Nonferrous die-casting exc. aluminum  
 3365 Aluminum foundries  
 3366 Copper foundries  
 3369 Nonferrous foundries, nec  
 3398 Metal heat treating  
 3399 Primary metal products, nec

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### **34 Fabricated Metal Products**

3411 Metal cans  
 3412 Metal barrels, drums, and pails  
 3421 Cutlery  
 3423 Hand and edge tools, nec  
 3425 Saw blades and handsaws  
 3429 Hardware, nec

3431 Metal sanitary ware  
 3432 Plumbing fixture fittings and trim  
 3433 Heating equipment, except electric  
 3441 Fabricated structural metal  
 3442 Metal doors, sash, and trim  
 3443 Fabricated plate work (boiler shops)  
 3444 Sheet metalwork  
 3446 Architectural metal work  
 3448 Prefabricated metal buildings  
 3449 Miscellaneous metal work  
 3451 Screw machine products  
 3452 Bolts, nuts, rivets, and washers  
 3462 Iron and steel forgings  
 3463 Nonferrous forgings  
 3465 Automotive stampings  
 3466 Crowns and closures  
 3469 Metal stampings, nec  
 3471 Plating and polishing  
 3479 Metal coating and allied services  
 3482 Small arms ammunition  
 3483 Ammunition, exc. for small arms, nec  
 3484 Small arms  
 3489 Ordnance and accessories, nec  
 3491 Industrial valves  
 3492 Fluid power valves & hose fittings  
 3493 Steel springs, except wire  
 3494 Valves & pipe fittings, nec  
 3495 Wire springs  
 3496 Misc. fabricated wire products  
 3497 Metal foil & leaf  
 3498 Fabricated pipe & fittings  
 3499 Fabricated metal products, nec

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### **35 Industrial Machinery and Equipment**

3511 Turbines and turbine generator sets  
 3519 Internal combustion engines, nec  
 3523 Farm machinery and equipment  
 3524 Lawn and garden equipment  
 3531 Construction machinery  
 3532 Mining machinery  
 3533 Oil and gas field machinery  
 3534 Elevators and moving stairways  
 3535 Conveyors and conveying equipment  
 3536 Hoists, cranes, and monorails  
 3537 Industrial trucks and tractors  
 3541 Machine tools, metal cutting types  
 3542 Machine tools, metal forming types  
 3543 Industrial patterns  
 3544 Special dies, tools, jigs & fixtures  
 3545 Machine tool accessories  
 3546 Power-driven handtools  
 3547 Rolling mill machinery  
 3548 Welding apparatus

**Standard Industrial Classification (SIC) Codes**  
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3549 Metalworking machinery, nec  
 3552 Textile machinery  
 3553 Woodworking machinery  
 3554 Paper industries machinery  
 3555 Printing trades machinery  
 3556 Food products machinery  
 3559 Special industry machinery, nec  
 3561 Pumps and pumping equipment  
 3562 Ball and roller bearings  
 3563 Air and gas compressors  
 3564 Blowers and fans  
 3565 Packaging machinery  
 3566 Speed changers, drives, and gears  
 3567 Industrial furnaces and ovens  
 3568 Power transmission equipment, nec  
 3569 General industrial machinery, nec  
 3571 Electronic computers  
 3572 Computer storage devices  
 3575 Computer terminals  
 3577 Computer peripheral equipment, nec  
 3578 Calculating and accounting equipment  
 3579 Office machines, nec  
 3581 Automatic vending machines  
 3582 Commercial laundry equipment  
 3585 Refrigeration and heating equipment  
 3586 Measuring and dispensing pumps  
 3589 Service industry machinery, nec  
 3592 Carburetors, pistons, rings, valves  
 3593 Fluid power cylinders & actuators  
 3594 Fluid power pumps & motors  
 3596 Scales and balances, exc. laboratory  
 3599 Industrial machinery, nec

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**36 Electronic & Other Electric Equipment**

3612 Transformers, except electronic  
 3613 Switchgear and switchboard apparatus  
 3621 Motors and generators  
 3624 Carbon and graphite products  
 3625 Relays and industrial controls  
 3629 Electrical industrial apparatus, nec  
 3631 Household cooking equipment  
 3632 Household refrigerators and freezers  
 3633 Household laundry equipment  
 3634 Electric housewares and fans  
 3635 Household vacuum cleaners  
 3639 Household appliances, nec  
 3641 Electric lamps  
 3643 Current-carrying wiring devices  
 3644 Noncurrent-carrying wiring devices  
 3645 Residential lighting fixtures  
 3646 Commercial lighting fixtures  
 3647 Vehicular lighting equipment  
 3648 Lighting equipment, nec

3651 Household audio and video equipment  
 3652 Prerecorded records and tapes  
 3661 Telephone and telegraph apparatus  
 3663 Radio & TV communications equipment  
 3669 Communications equipment, nec  
 3671 Electron tubes  
 3672 Printed circuit boards  
 3674 Semiconductors and related devices  
 3675 Electronic capacitors  
 3676 Electronic resistors  
 3677 Electronic coils and transformers  
 3678 Electronic connectors  
 3679 Electronic components, nec  
 3691 Storage batteries  
 3692 Primary batteries, dry and wet  
 3694 Engine electrical equipment  
 3695 Magnetic and optical recording media  
 3699 Electrical equipment & supplies, nec

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**37 Transportation Equipment**

3711 Motor vehicles and car bodies  
 3713 Truck and bus bodies  
 3714 Motor vehicle parts and accessories  
 3715 Truck trailers  
 3716 Motor homes  
 3721 Aircraft  
 3724 Aircraft engines and engine parts  
 3728 Aircraft parts and equipment, nec  
 3731 Ship building and repairing  
 3732 Boat building and repairing  
 3743 Railroad equipment  
 3751 Motorcycles, bicycles, and parts  
 3761 Guided missiles and space vehicles  
 3764 Space propulsion units and parts  
 3769 Space vehicle equipment, nec  
 3792 Travel trailers and campers  
 3795 Tanks and tank components  
 3799 Transportation equipment, nec

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**38 Instruments and Related Products**

3812 Search and navigation equipment  
 3821 Laboratory apparatus and furniture  
 3822 Environmental controls  
 3823 Process control instruments  
 3824 Fluid meters and counting devices  
 3825 Instruments to measure electricity  
 3826 Analytical instruments  
 3827 Optical instruments and lenses  
 3829 Measuring & controlling devices, nec  
 3841 Surgical and medical instruments

**Standard Industrial Classification (SIC) Codes**  
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3842 Surgical appliances and supplies  
 3843 Dental equipment and supplies  
 3844 X-ray apparatus and tubes  
 3845 Electromedical equipment  
 3851 Ophthalmic goods  
 3861 Photographic equipment and supplies  
 3873 Watches, clocks, watchcases & parts

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**39      Miscellaneous  
 Manufacturing Industries**

3911 Jewelry, precious metal  
 3914 Silverware and plated ware  
 3915 Jewelers' materials & lapidary work  
 3931 Musical instruments  
 3942 Dolls and stuffed toys  
 3944 Games, toys, and children's vehicles  
 3949 Sporting and athletic goods, nec  
 3951 Pens and mechanical pencils  
 3952 Lead pencils and art goods  
 3953 Marking devices  
 3955 Carbon paper and inked ribbons  
 3961 Costume jewelry  
 3965 Fasteners, buttons, needles, & pins  
 3991 Brooms and brushes  
 3993 Signs and advertising specialties  
 3995 Burial caskets  
 3996 Hard surface floor coverings, nec  
 3999 Manufacturing industries, nec

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**40      Railroad Transportation**

4011 Railroads, line-haul operating  
 4013 Switching and terminal services

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**44      Water Transportation**

4412 Deep sea foreign trans. of freight  
 4424 Deep sea domestic trans. of freight  
 4432 Freight trans. on the Great Lakes  
 4449 Water transportation of freight, nec  
 4481 Deep sea passenger trans., ex. ferry  
 4482 Ferries  
 4489 Water passenger transportation, nec  
 4491 Marine cargo handling  
 4492 Towing and tugboat service  
 4493 Marinas  
 4499 Water transportation services, nec

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**45      Transportation By Air**

4512 Air transportation, scheduled  
 4513 Air courier services  
 4522 Air transportation, nonscheduled

4581 Airports, flying fields, & services

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**46      Pipelines, Except Natural  
 Gas**

4612 Crude petroleum pipelines  
 4613 Refined petroleum pipelines  
 4619 Pipelines, nec

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**47      Transportation Services**

4724 Travel agencies  
 4725 Tour operators  
 4729 Passenger transport arrangement, nec  
 4731 Freight transportation arrangement  
 4741 Rental of railroad cars  
 4783 Packing and crating  
 4785 Inspection & fixed facilities  
 4789 Transportation services, nec

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**48      Communication**

4812 Radiotelephone communications  
 4813 Telephone communications, exc. radio  
 4822 Telegraph & other communications  
 4832 Radio broadcasting stations  
 4833 Television broadcasting stations  
 4841 Cable and other pay TV services  
 4899 Communication services, nec

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**49      Electric, Gas, and Sanitary  
 Services**

4911 Electric services  
 4922 Natural gas transmission  
 4923 Gas transmission and distribution  
 4924 Natural gas distribution  
 4925 Gas production and/or distribution  
 4931 Electric and other services combined  
 4932 Gas and other services combined  
 4939 Combination utilities, nec  
 4941 Water supply  
 4952 Sewerage systems  
 4953 Refuse systems  
 4959 Sanitary services, nec  
 4961 Steam and air-conditioning supply  
 4971 Irrigation systems

**Standard Industrial Classification (SIC) Codes**  
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**50 Wholesale Trade--Durable Goods**

5012 Automobiles and other motor vehicles  
5013 Motor vehicle supplies and new parts  
5014 Tires and tubes  
5015 Motor vehicle parts, used  
5021 Furniture  
5023 Homefurnishings  
5031 Lumber, plywood, and millwork  
5032 Brick, stone, & related materials  
5033 Roofing, siding, & insulation  
5039 Construction materials, nec  
5043 Photographic equipment and supplies  
5044 Office equipment  
5045 Computers, peripherals & software  
5046 Commercial equipment, nec  
5047 Medical and hospital equipment  
5048 Ophthalmic goods  
5049 Professional equipment, nec  
5051 Metals service centers and offices  
5052 Coal and other minerals and ores  
5063 Electrical apparatus and equipment  
5064 Electrical appliances, TV & radios  
5065 Electronic parts and equipment  
5072 Hardware  
5074 Plumbing & hydronic heating supplies  
5075 Warm air heating & air-conditioning  
5078 Refrigeration equipment and supplies  
5082 Construction and mining machinery  
5083 Farm and garden machinery  
5084 Industrial machinery and equipment  
5085 Industrial supplies  
5087 Service establishment equipment  
5088 Transportation equipment & supplies  
5091 Sporting & recreational goods  
5092 Toys and hobby goods and supplies  
5093 Scrap and waste materials  
5094 Jewelry & precious stones  
5099 Durable goods, nec

**51 Wholesale Trade--Nondurable Goods**

5111 Printing and writing paper  
5112 Stationery and office supplies  
5113 Industrial & personal service paper  
5122 Drugs, proprietaries, and sundries  
5131 Piece goods & notions  
5136 Men's and boys' clothing  
5137 Women's and children's clothing  
5139 Footwear  
5141 Groceries, general line  
5142 Packaged frozen foods  
5143 Dairy products, exc. dried or canned

5144 Poultry and poultry products  
5145 Confectionery  
5146 Fish and seafoods  
5147 Meats and meat products  
5148 Fresh fruits and vegetables  
5149 Groceries and related products, nec  
5153 Grain and field beans  
5154 Livestock  
5159 Farm-product raw materials, nec  
5162 Plastics materials & basic shapes  
5169 Chemicals & allied products, nec  
5171 Petroleum bulk stations & terminals  
5172 Petroleum products, nec  
5181 Beer and ale  
5182 Wine and distilled beverages  
5191 Farm supplies  
5192 Books, periodicals, & newspapers  
5193 Flowers & florists' supplies  
5194 Tobacco and tobacco products  
5198 Paints, varnishes, and supplies  
5199 Nondurable goods, nec

**72 Personal Services**

7211 Power laundries, family & commercial  
7212 Garment pressing & cleaners' agents  
7213 Linen supply  
7215 Coin-operated laundries and cleaning  
7216 Drycleaning plants, except rug  
7217 Carpet and upholstery cleaning  
7218 Industrial launderers  
7219 Laundry and garment services, nec  
7221 Photographic studios, portrait  
7231 Beauty shops  
7241 Barber shops  
7251 Shoe repair and shoeshine parlors  
7261 Funeral service and crematories  
7291 Tax return preparation services  
7299 Miscellaneous personal services, nec

**73 Business Services**

7311 Advertising agencies  
7312 Outdoor advertising services  
7313 Radio, TV, publisher representatives  
7319 Advertising, nec  
7322 Adjustment & collection services  
7323 Credit reporting services  
7331 Direct mail advertising services  
7334 Photocopying & duplicating services  
7335 Commercial photography  
7336 Commercial art and graphic design  
7338 Secretarial & court reporting  
7342 Disinfecting & pest control services  
7349 Building maintenance services, nec

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7352 Medical equipment rental  
 7353 Heavy construction equipment rental  
 7359 Equipment rental & leasing, nec  
 7361 Employment agencies  
 7363 Help supply services  
 7371 Computer programming services  
 7372 Prepackaged software  
 7373 Computer integrated systems design  
 7374 Data processing and preparation  
 7375 Information retrieval services  
 7376 Computer facilities management  
 7377 Computer rental & leasing  
 7378 Computer maintenance & repair  
 7379 Computer related services, nec  
 7381 Detective & armored car services  
 7382 Security systems services  
 7383 News syndicates  
 7384 Photofinishing laboratories  
 7389 Business services, nec

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Only SIC Codes that are TURA Reportable are listed.

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**75 Auto Repair, Services, and Parking**

7513 Truck rental and leasing, no drivers  
 7514 Passenger car rental  
 7515 Passenger car leasing  
 7519 Utility trailer rental  
 7521 Automobile parking  
 7532 Top & body repair & paint shops  
 7533 Auto exhaust system repair shops  
 7534 Tire retreading and repair shops  
 7536 Automotive glass replacement shops  
 7537 Automotive transmission repair shops  
 7538 General automotive repair shops  
 7539 Automotive repair shops, nec  
 7542 Carwashes  
 7549 Automotive services, nec

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**76 Miscellaneous Repair Services**

7622 Radio and television repair  
 7623 Refrigeration service and repair  
 7629 Electrical repair shops, nec  
 7631 Watch, clock, and jewelry repair  
 7641 Reupholstery and furniture repair  
 7692 Welding repair  
 7694 Armature rewinding shops  
 7699 Repair services, nec

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## Appendix B

### WHAT TOXIC SUBSTANCES ARE SUBJECT TO TURA REPORTING?

All of the substances listed under Section 313 of EPCRA, and all of the substances that are on the federal Superfund (CERCLA) list of chemicals are reportable under TURA, except for those chemicals that have been delisted by the Administrative Council on Toxics Use Reduction. The list of TURA chemicals subject to reporting for reports due July 1, 2002 is located at the end of this Appendix. (The column entitled “ADD” refers to the year in which the chemical was added to the TURA list.) They include:

- ❑ EPCRA 313 and CERCLA chemicals and chemical categories sorted by chemical name
- ❑ EPCRA 313 and CERCLA chemicals and chemical categories sorted by CAS number

The following chemicals have been delisted from TURA (but in certain cases are reportable under EPCRA):

Reporting Year/Chemical Delisted	Reason/Note
<b>1994</b>	
Barium Sulfate	EPCRA delisting and not CERCLA reportable
All copper phthalocyanine compounds that are substituted with only hydrogen and/or chlorine and/or bromine (delisted from the copper compounds category)	EPCRA delisting and not CERCLA reportable
High molecular weight glycol ethers	EPCRA delisting and not CERCLA reportable
<b>1995</b>	
Certain Metal Alloys (refer to <b>Appendix F</b> )	TURA Administrative Council delisting
Chromium (III) Oxide from chromium compounds category	TURA Administrative Council delisting
Ammonium Sulfate Solution (CAS#7783-20-2)	EPCRA delisting and not CERCLA reportable
Ammonium Nitrate Solution (CAS#6484-52-2)	EPCRA delisting and not CERCLA reportable
<b>1996</b>	
Hydroquinone (except for the manufacture of the chemical)	TURA Administrative Council delisting
Acetic Acid at concentrations of 12% or less	TURA Administrative Council delisting
Di-(2-ethylhexyl)adipate (DEHA) (CAS#103-23-1)	EPCRA delisting and not CERCLA reportable
<b>1997</b>	
Zinc Oxide from zinc compounds category	TURA Administrative Council delisting
Radionuclides	TURA Administrative Council delisting
2-bromo-2-nitropropane (Bronopol) (CAS#52-51-7)	EPCRA delisting and not CERCLA reportable
2, 6 dimethylphenol (CAS# 576-26-1)	EPCRA delisting and not CERCLA reportable
Carbamate waste category	CERCLA delisting and not EPCRA reportable
<b>1998</b>	
Silver-Copper Alloy	TURA Administrative Council delisting
<b>1999</b>	
Pure Copper and Pure Silver	TURA Administrative Council delisting
Caprolactum	CERCLA delisting and not EPCRA reportable
<b>2000</b>	
Zinc Stearate from zinc compounds category	TURA Administrative Council delisting

## 1. Difference Between TRI and TURA Reporting of Hydrochloric Acid and Sulfuric Acid

- ❑ A qualifier was added to **hydrochloric acid (CAS No. 7647-01-0)** on the EPCRA list that relieves reporting for non-aerosol forms, effective reporting year 1996. A similar qualifier was added for **sulfuric acid (CAS No. 7664-93-9)** effective reporting year 1995. Reporting only is required for acid aerosols including mists, gas, vapors, fog, and other airborne forms of any particle size. **This qualifier is only applicable to EPCRA Form R submissions.**
- ❑ Since this chemical also is on the CERCLA list, **all forms (both aerosol and non-aerosol) are reportable under TURA.** A "State-Only" Form R must be submitted with the Form S for these acids, as well as the Form R submitted to EPA for only acid aerosols.
- ❑ For additional assistance on calculating and reporting sulfuric acid, please refer to the following EPA document: Sulfuric Acid: EPA-745-R-97-007 (11/97) Guidance for Reporting Sulfuric Acid (acid aerosols including mists, vapors, gas, fog and other forms of any particle size). This document is available from the EPA EPCRA Hotline 1-800-535-0202 and can be downloaded off the EPA TRI home page at [http://www.epa.gov/tri/guide\\_docs/1998/sulfuric.pdf](http://www.epa.gov/tri/guide_docs/1998/sulfuric.pdf).

## 2. Rules For Reporting Certain Chemical Categories

### Rules for Reporting Water Dissociable Nitrate Compounds Category

The 1996 EPA TRI guidance document, "List of Toxic Chemicals within the Water Dissociable Nitrate Compounds Category and Guidance for Reporting" (EPA 745-R-96-004), provides a detailed description of how to report this chemical category. The following general overview is from the guidance document:

"Chemicals within the nitrate compounds category are only reportable when in aqueous solution. All water dissociable nitrate compounds are included in the nitrate compounds category, including ammonium nitrate. Specifically listed section 313 chemicals *are not* included in threshold determinations for chemical categories such as the water dissociable nitrate compounds category. Specifically listed toxic chemicals are subject to their own individual threshold determinations. As of December 1, 1994, ammonium nitrate (solution) is not an individually listed chemical on the EPCRA section 313 list. However, ammonium nitrate is still subject to reporting under the nitrate compounds category. In addition, the aqueous ammonia from the dissociation of ammonium nitrate when in aqueous solution is subject to reporting under the ammonia listing."

The following is an example from the TRI guidance document:

#### ✓ Example

In a calendar year, a facility manufactures as byproducts, 20,000 pounds of sodium nitrate and 10,000 pounds of calcium nitrate, both in aqueous solutions, and releases these solutions to wastewater streams. The total quantity of nitrate compounds manufactured by the facility is the sum of the two chemicals, or 30,000 pounds, which exceeds the manufacturing threshold quantity of 25,000 pounds. The facility therefore is required to report for the nitrate compounds category.

There are three diisocyanates that are reported individually under EPCRA, and not as the diisocyanate chemical category:

- Toluene-2,4-diisocyanate (584-84-9)
- Toluene-2,6-diisocyanate (91-08-7)
- Toluene diisocyanate (mixed isomers) (26471-62-5)

## Rules for Reporting Glycol Ethers

There are separate categories for glycol ethers defined under EPCRA and CERCLA.

(Please refer to the TRI guidance document, “List of Toxic Chemicals within the Glycol Ethers Category and Guidance for Reporting,” EPA 745-R-95-006.)



### Reporting Guidance

**EPCRA:** Glycol Ethers are reportable as the glycol ethers category, N230. The specific chemical formula which defines the EPCRA glycol ethers category is as follows:



where

n	=	1, 2, or 3;
R	=	Alkyl C7 or less, or phenyl or alkyl substituted phenyl;
R'	=	H or alkyl C7 or less, or

OR' consisting of a carboxylic acid ester, sulfate, phosphate, nitrate, or sulfonate.



### Reporting Guidance

**CERCLA:** Glycol Ethers are reportable under CERCLA as defined by the following chemical formula:

Includes mono and di-ethers of ethylene glycol, diethylene glycol, and triethylene glycol R-(OCH<sub>2</sub>CH<sub>2</sub>)<sub>n</sub>-OR' where:

- n= 1, 2, or 3.
- R= alkyl or aryl groups.
- R'= R, H, or groups which, when removed, yield glycol ethers with the structure: R-(OCH<sub>2</sub>CH<sub>2</sub>)<sub>n</sub>-OH. Polymers are excluded from the glycol category.

**Any glycol ether that meets the CERCLA definition only is reportable if it is specifically named on the TURA list.** If a glycol ether meets both the EPCRA and the CERCLA definitions, it is reportable under the EPCRA category (N230).

## Rules For Reporting Specifically Listed Chemicals vs. Chemical Categories

### Rules for Reporting the Use of Ammonia and Ammonium Hydroxide under TURA

To further clarify the reporting of ammonia and ammonium hydroxide under TURA, DEP recommends that reporting be consistent with EPCRA. Thus, there will not be a “state only” Form R required for ammonium hydroxide, and TURA filers should not file a Form S for ammonium hydroxide (CAS# 1336-21-6). Only one fee will be required to the state for the reporting of ammonia as ammonium hydroxide. DEP interprets ammonium hydroxide to be equivalent to aqueous ammonia (as does EPCRA), and 10% of aqueous ammonia (CAS# 7664-41-7) is reportable under TURA, effective reporting year 2000. Please refer to the EPCRA Section 313 Guidance for Reporting Aqueous Ammonia, Revised December 2000, EPA 745-R-00-005.

The following is quoted from #451, EPCRA Section 313 Questions and Answers, December 1998, EPA 745-B-98-004:

“ . . . The chemical ammonium hydroxide (NH<sub>4</sub>OH) is a misnomer. It is a common name used to describe a solution of ammonia in water (i.e., aqueous ammonia), typically a concentrated solution of 28 to 30 percent ammonia. EPA has consistently responded to questions regarding the reportability of these purported ammonium hydroxide solutions under the EPCRA Section 313 ammonia listing by stating that these are 28 to 30 percent solutions of ammonia in water and that the solutions are reportable under EPCRA Section 313 ammonia listing. For a more detailed discussion, see page 34175 of the Federal Register final rule of June 30, 1995 (60 FR 34172).

*Facilities* should use the percent total ammonia specified on the label of ammonium hydroxide solutions they purchase to determine the total ammonia content in these solutions. Ammonium hydroxide has the chemical formula NH<sub>4</sub>OH; however, as mentioned above, strong evidence indicates that the species NH<sub>4</sub>OH does not exist. Bottles of concentrated aqueous ammonia purchased from chemical supply companies are almost always labeled ammonium hydroxide. These solutions primarily consist of molecules of NH<sub>3</sub> dissolved in water (along with small amounts of ionized ammonia) . . . ”

Please note that different chemical suppliers will reference the % of ammonia in different ways. Therefore, it is recommended that facilities contact their chemical suppliers to specify the amount of ammonia per gallon. This question could be specified in “percent by weight per gallon” or in “number of pounds per gallon” of solution, for example.

### ✓ Examples

#### Example 1:

Facility otherwise uses 1,000,000 pounds of 30% solution by weight of ammonium hydroxide (30% ammonia by weight).

$1,000,000 \text{ pounds} \times 0.30 = 300,000 \text{ pounds of ammonia}$

Only 10% of ammonia is reportable on Form R per EPA Guidance for Reporting Aqueous Ammonia

$300,000 \times 0.10 = 30,000 \text{ pounds of ammonia}$

This facility would complete one Form S and one Form R for 30,000 pounds of reportable ammonia (see EPCRA Guidance for Reporting Aqueous Ammonia).

### ✓ Examples

#### Example 2:

54,231 gallons of aqueous ammonia (19.0%)

$54,231 \text{ gallons} \times 8.34 \text{ pounds/gallon} \times 0.935 \text{ specific gravity}$

$= 422,888 \text{ pounds aqueous ammonia} \times 19.0\%$

$80,349 \text{ pounds ammonia} \times 10\% \text{ reportable ammonia} = 8,035 \text{ pounds ammonia}$

This facility does not meet TURA or TRI reporting thresholds.

The table below summarizes how to report chemicals that are specifically listed and/or listed as chemical categories. Descriptions of specific reporting requirements for each row follow the table.

Row No.	EPCRA Specific Chemical	EPCRA Category	CERCLA Specific Chemical	CERCLA Category	Report as:
1	yes	yes			EPCRA Specific Chemical
2	yes			yes	EPCRA Specific Chemical
3		yes	yes		EPCRA Category
4			yes	yes	CERCLA Specific Chemical
5		yes			EPCRA Category
6		yes		yes	EPCRA Category
7				yes	Do Not Report *

#### Rows 1 & 2:

If a specific chemical is named on EPCRA and it also is reportable under either an EPCRA or CERCLA listed category, it should be reported **only as a specific EPCRA chemical, not under the category.**

#### ✓ Example

Hydrogen Cyanide: EPCRA category (Cyanide Compounds), EPCRA specifically listed  
*Report as: EPCRA specific chemical (Hydrogen Cyanide)*

1,2,4 Trichlorobenzene: EPCRA specifically listed, CERCLA category (Chlorinated Benzenes)  
*Report as: EPCRA specific chemical (1,2,4 Trichlorobenzene)*

#### Row 3:

When a specifically listed CERCLA chemical falls within an EPCRA listed category, it should be reported **only under the EPCRA chemical category and not under the specific chemical name.**

#### ✓ Example

Calcium Cyanide: EPCRA category (Cyanide Compounds), CERCLA specifically listed  
*Report as: EPCRA category (Cyanide Compounds)*

#### Row 4:

When a specifically listed CERCLA chemical falls within a CERCLA listed category, it should be reported **only as the specific CERCLA chemical.**

### ✓ Example

- Benzenesulfonyl Chloride: CERCLA specifically listed, CERCLA category (Chlorinated Benzenes)  
*Report as: CERCLA specific chemical (Benzenesulfonyl Chloride)*

#### Row 5:

Chemicals falling under an EPCRA chemical category or categories which are not specifically listed under EPCRA or CERCLA, should be reported under the EPCRA chemical category or categories.

### ✓ Example: Lead Chromate, Reporting Two Competing Compound Classes

If you are reporting lead chromate you need to report under the lead compounds and chromium compounds categories

- **Report the SAME weight for Lead Compounds and Chromium Compounds use (total weight of the compound) on EACH Form S.**
- For Byproduct tracking, report ONLY the weight of the reportable constituent for each category.
- In Optional Section 2 of each Form S, enter the weight of the chemical in d.
- Even though you will file 2 separate Form Ss for Lead Compounds and Chromium Compounds, you will **pay only ONE TURA fee for both chemicals.** (Example Form Ss are shown on the next page.)

#### Row 6:

Chemicals falling under an EPCRA chemical category and a CERCLA chemical category which are not specifically listed under EPCRA or CERCLA should be reported under the EPCRA chemical category.

#### Row 7:

Chemicals that only are listed as a CERCLA category are not reportable.

**CERCLA Category only: phthalate esters, polynuclear aromatic hydrocarbons, polycyclic organic matter, glycol ethers, chlorinated phenols, etc. should NOT be reported unless they are specifically named.**

### ✓ Form S Example:

#### Section 1: Facility-Wide Use of Listed Chemical

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1026

---

Lead Compounds

---

a. CAS #

b. Chemical Name (Dioxin will be assumed to be grams, decimal points may be used)

Facility-wide use of chemical identified in a. Enter the total amount (in POUNDS, except for dioxin) for each applicable category. **NOTE:** 'Generated as byproduct' (item f.) generally means all waste containing the listed chemical before the waste is treated or recycled. Please refer to the reporting instructions before completing this section.

---

c. Manufactured

---

d. Processed

---

e. Otherwise used

---

650

---

66,000

---

f. Generated as Byproduct

---

g. Shipped in or as product

---

**Section 2: Optional Questions**

When the amounts reported in c, d and e in Section 1 are added together, the sum will in many cases equal the sum of f and g. In other words, lines c,d and e will often form a "materials balance." If lines c,d and e are not in approximate balance, you may use this section to explain why. Indicate all the reasons that apply by entering the number of pounds on the appropriate line below (e.g., 4,000 Chemical was held in inventory).

---

a. Chemical was recycled on site

---

b. Chemical was consumed or transformed

---

300; 33,000

---

c. Chemical was held in inventory

---

d. Chemical is a compound

---

e. Other (explain below)

f. Did anything non-routine occur at your facility during the reporting year which affected the data reported? Yes ☐ No ☐ If yes, please explain.

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**Section 1: Facility-Wide Use of Listed Chemical**

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1012

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Chromium Compounds

---

a. CAS #

b. Chemical Name (Dioxin will be assumed to be grams, decimal points may be used)

Facility-wide use of chemical identified in a. Enter the total amount (in POUNDS, except for dioxin) for each applicable category. **NOTE:** 'Generated as byproduct' (item f.) generally means all waste containing the listed chemical before the waste is treated or recycled. Please refer to the reporting instructions before completing this section.

---

c. Manufactured

---

d. Processed

---

e. Otherwise used

---

350

---

33,000

---

f. Generated as Byproduct

---

g. Shipped in or as product

---

**Section 2: Optional Questions**

When the amounts reported in c, d and e in Section 1 are added together, the sum will in many cases equal the sum of f and g. In other words, lines c,d and e will often form a "materials balance." If lines c,d and e are not in approximate balance, you may use this section to explain why. Indicate all the reasons that apply by entering the number of pounds on the appropriate line below (e.g., 4,000 Chemical was held in inventory).

\_\_\_\_\_  
a. Chemical was recycled on site

\_\_\_\_\_  
b. Chemical was consumed or transformed

\_\_\_\_\_  
c. Chemical was held in inventory

See above

\_\_\_\_\_  
d. Chemical is a compound

\_\_\_\_\_  
e. Other (explain below)

f. Did anything non-routine occur at your facility during the reporting year which affected the data reported?    Yes ☐    No ☐    If yes, please explain.



## Summary of TURA Reportable Chemical Categories

TURA requires reporting on the chemical categories listed below. The individual chemicals included in each chemical category should always be reported in their parent chemical category (e.g., antimony compounds), and not as individual chemicals. Please note that this is not an exhaustive list of individual chemicals within the chemical categories.

Chemical Category	CAS No.	Chemical Name
<b>Antimony Compounds</b> Includes any unique chemical substance that contains antimony as part of the chemical's infrastructure. Includes, but is not limited to:	1309-64-4	Antimony Trioxide
	7647-18-9	Antimony Pentachloride
	7783-56-4	Antimony Trifluoride
	7789-61-9	Antimony Tribromide
	10025-91-9	Antimony Trichloride
	28300-74-5	Antimony Potassium Tartrate
<b>Arsenic Compounds</b> Includes any unique chemical substance that contains arsenic as part of the chemical's infrastructure. Includes, but is not limited to:	692-42-2	Diethylarsine
	696-28-6	Dichlorophenylarsine
	1303-28-2	Arsenic Pentoxide
	1303-32-8	Arsenic Disulfide
	1303-33-9	Arsenic Trisulfide
	1327-52-2	Arsenic Acid
	1327-53-3	Arsenic Trioxide
	7631-89-2	Sodium Arsenate
	7645-25-2	Lead Arsenate
	7778-39-4	Arsenic Acid
	7778-44-1	Calcium Arsenate
	7784-34-1	Arsenous Trichloride
	7784-40-9	Lead Arsenate
	7784-41-0	Potassium Arsenate
	7784-46-5	Sodium Arsenite
	10102-48-4	Lead Arsenate
	10124-50-2	Potassium Arsenate
	52740-16-6	Calcium Arsenate
<b>Barium Compounds</b> Includes any unique chemical substance that contains barium as part of the chemical's infrastructure. Does not include barium sulfate, CAS # 7727-43-7. Includes, but is not limited to:	542-62-1	Barium Cyanide
<b>Beryllium Compounds</b> Includes any unique chemical substance that contains beryllium as part of the chemical's infrastructure. Includes, but is not limited to:	7787-47-5	Beryllium Chloride
	7787-49-7	Beryllium Fluoride
	7787-55-5	Beryllium Nitrate
	13597-99-4	Beryllium Nitrate
<b>Cadmium Compounds</b> Includes any unique chemical substance that contains cadmium as part of the chemical's infrastructure. Includes, but is not limited to:	543-90-8	Cadmium Acetate
	7789-42-6	Cadmium Bromide
	10108-64-2	Cadmium Chloride

Chemical Category	CAS No.	Chemical Name
<b>Chlorophenols</b> Please see EPA 2001 TRI reporting instructions. Includes, but is not limited to:	58-90-2	2,3,4,6-Tetrachlorophenol
	87-65-0	2,6 Dichlorophenol
	95-57-8	2-Chlorophenol
	609-19-8	3,4,5 Trichlorophenol
	933-75-5	2,3,6 Trichlorophenol
	933-78-8	2,3,5 Trichlorophenol
	5344-82-1	2-Chlorophenolthiourea
	7005-72-3	Chlorophenyl Phenyl Ether
	15950-66-0	2,3,4 trichlorophenol
	25167-82-2	Trichlorophenol
<b>Chromium Compounds</b> Includes any unique chemical substance that contains chromium as part of the chemical's infrastructure. Includes, but is not limited to:	1066-30-4	Chromic Acetate
	2146-10-8	Sodium Chromate
	2151-06-8	Strontium Chromate
	2151-16-3	Ammonium Bichromate
	7738-94-5	Chromic Acid
	7778-50-9	Potassium Bichromate
	7788-98-9	Ammonium chromate
	7789-00-6	Potassium Chromate
	10049-05-5	Chromous Chloride
	10588-01-9	Sodium Bichromate
	10101-53-8	Chromic Sulfate
	11115-74-5	Chromic Acid
	13765-19-0	Calcium chromate
	14307-35-8	Lithium Chromate
<b>Cobalt Compounds</b> Includes any unique chemical substance that contains cobalt as part of the chemical's infrastructure. Includes, but is not limited to:	544-18-3	Cobaltous Formate
	7789-43-7	Cobaltous Bromide
	14017-41-5	Cobaltous Sulfamate
<b>Copper Compounds</b> Includes any unique chemical substance that contains copper as part of the chemical's infrastructure. Does not include copper phthalocyanine compounds that are substituted with only hydrogen, and/or chlorine, and/or bromine. Includes, but is not limited to:	137-29-1	Copper, bis(dimethylcarbamodithioato-s-s)-
	544-92-3	Copper Cyanide
	815-82-7	Cupric Tartrate
	3251-23-8	Cupric Nitrate
	5893-66-3	Cupric Oxalate
	7447-39-4	Cupric Chloride
	7758-98-7	Cupric Sulfate
	10380-29-7	Cupric Sulfate, Ammoniated

Chemical Category	CAS No.	Chemical Name
<b>Cyanide Compounds</b> $X^+CN^-$ where $X = H^+$ or any other group where a formal dissociation may occur. For example KCN or $CA(Cn)_2$ . Includes, but is not limited to:	57-12-5	Cyanides
	143-33-9	Sodium Cyanide
	151-50-8	Potassium Cyanide
	460-19-5	Cyanogen
	506-61-6	Potassium Silver Cyanide
	506-64-9	Silver Cyanide
	506-68-3	Cynogen Bromide
	506-77-4	Cyanogen Chloride
	542-62-1	Barium Cyanide
	544-92-3	Copper Cyanide
	557-19-7	Nickel Cyanide
	557-21-1	Zinc Cyanide
	592-01-8	Calcium Cyanide
	592-04-1	Mercuric Cyanide
	592-85-8	Mercuric Thiocyanate
	592-87-0	Lead Thiocyanate
	1762-95-4	Ammonium Thiocyanate
<b>Diisocyanates</b> Includes only the chemicals listed here.	91-93-0	3,3'-Dimethoxybenzidine-4,4' di-isocyanate
	91-97-4	3-3'-Dimethyl-4,4'-diphenylene diisocyanate
	101-68-8	Methylenebis(phenylisocyanate)(MDI) (previously reportable under EPCRA)
	104-49-4	1,4 Phenylene diisocyanate
	123-61-5	1,3-Phenylene diisocyanate
	139-25-3	3-3' Dimethyl diphenylmethane-4-4' diisocyanate
	822-06-0	Hexamethylene 1,6 -diisocyanate
	2556-36-7	1,4 Cyclohexane diisocyanate
	3173-72-6	1,5 Naphthalene diisocyanate
	4098-71-9	Isophorone diisocyanate
	4128-73-8	4,4'-diisocyanatodiphenylether
	5124-30-1	1,1-Methylene bis(4-isocyanato-cyclohexane
	9016-87-9	Polmeric diphenylmethane diisocyanate
	10347-54-3	1,4-Bis(methylisocyanate)cyclohexane
	15646-96-5	2,4,4-Trimethylhexamethylene diisocyanate
	16938-22-0	2,2,4-Trimethylhexamethylene diisocyanate
	38661-72-2	1,3-Bis(methylisocyanate)cyclo-hexane
	75790-84-0	4-Methyldiphenylmethane-3,4-diisocyanate
	75790-87-3	2,4'-Diisocyanatodiphenyl sulfide
	134190-37-7	Diethyldiisocyanatobenzene

Chemical Category	CAS No.	Chemical Name
<b>Dioxin &amp;Dioxin-Like Compounds</b> Manufacturing; and the processing or otherwise use of dioxin or dioxin-like compounds if the dioxin and dioxin-like compounds are present as contaminants in a chemical and if they were created during the manufacture of that chemical. Includes only the chemicals listed here.	1746-01-6	2,3,7,8- Tetrachlorodibenzo-p-dioxin
	3268-87-92	1,2,3,4,6,7,8,9- Octachlorodibenzo-p-dioxin
	19408-74-3	1,2,3,7,8,9- Hexachlorodibenzo-p-dioxin
	35822-46-9	1,2,3,4,6,7,8- Heptachlorodibenzo-p-dioxin
	39001-02-0	1,2,3,4,6,7,8,9- Octachlorodibenzofuran
	39227-28-6	1,2,3,4,7,8-- Hexachlorodibenzo-p-dioxin
	40321-76-4	1,2,3,7,8-- Pentachlorodibenzo-p-dioxin
	51207-31-9	2,3,7,8- Tetrachlorodibenzofuran
	55673-89-7	1,2,3,4,7,8,9- Heptachlorodibenzofuran
	57117-31-4	2,3,4,7,8- Pentachlorodibenzofuran
	57117-41-6	1,2,3,7,8- Pentachlorodibenzofuran
	57117-44-9	1,2,3,6,7,8- Hexachlorodibenzofuran
	57653-85-7	1,2,3,6,7,8- Hexachlorodibenzo-p-dioxin
	60851-34-5	2,3,4,6,7,8- Hexachlorodibenzofuran
	67562-39-4	1,2,3,4,6,7,8- Heptachlorodibenzofuran
	70648-26-9	1,2,3,4,7,8- Hexachlorod-benzofuran
	72918-21-9	1,2,3,7,8,9- Hexachlorodibenzofuran
<b>Ethylenebisdithiocarbamic acid, salts, esters</b> Includes any unique chemical substance that contains an EBDC or an EBDC salt as part of that chemical's infrastructure. Includes, but is not limited to:	111-54-6	Ethylenebisdithiocarbamic acid, salts, esters
<b>Certain Glycol Ethers</b> Please see guidance on page B-3 of this document.		
<b>Lead Compounds</b> Includes any unique chemical substance that contains lead as part of the chemical's infrastructure. Includes, but is not limited to:	301-04-2	Lead Acetate
	592-87-0	Lead Thiocyanate
	1072-35-1	Lead Stearate
	1314-87-0	Lead Sulfide
	1335-32-6	Lead Subacetate
	7428-48-0	Lead Stearate
	7446-27-7	Lead Phosphate
	7446-14-2	Lead Sulfate
	7645-25-2	Lead Arsenate
	7758-95-4	Lead Chloride
	7783-46-2	Lead Fluoride
	10099-74-8	Lead Nitrate
	10101-63-0	Lead Iodide
	10102-48-4	Lead Arsenate
	13814-96-5	Lead Fluoborate
	15739-80-7	Lead Sulfate
	52652-59-2	Lead Stearate
	56189-09-4	Lead Stearate

Chemical Category

CAS No.

Chemical Name

<b>Manganese Compounds</b> Includes any unique chemical substance that contains lead as part of the chemical's infrastructure. Includes, but is not limited to:	7722-64-7	Potassium Permanganate
	15339-36-3	Manganese, bis(dimethylcarbamodithiato-s-s)

<b>Mercury Compounds</b> Includes any unique chemical substance that contains mercury as part of the chemical's infrastructure. Includes, but is not limited to:	592-04-1	Mercuric Cyanide
	592-85-8	Mercuric Thiocyanate
	628-86-4	Mercury Fulminate
	7782-86-7	Mercurous Nitrate
	7783-35-9	Mercuric sulfate
	10415-75-5	Mercurous Nitrate
	10045-94-0	Mercuric Nitrate

<b>Nickel Compounds</b> Includes any unique chemical substance that contains nickel as part of the chemical's infrastructure. Includes, but is not limited to:	557-19-7	Nickel Cyanide
	7718-54-9	Nickel chloride
	7786-81-4	Nickel Sulfate
	12054-48-7	Nickel Hydroxide
	13463-39-3	Nickel Carbonyl
	14216-75-2	Nickel Nitrate
	15699-18-0	Nickel Ammonium Sulfate
	37211-05-5	Nickel chloride

<b>Nicotine and Salts</b> Includes any unique chemical substance that contains nicotine or a nicotine salt as part of the chemical's infrastructure. Includes, but is not limited to:	54-11-5	Nicotine
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<b>Nitrate Compounds (water dissociable)</b> Includes, but is not limited to:	1004-54-0	Mercuric Nitrate
	7761-88-8	Silver Nitrate
	7779-88-6	Zinc Nitrate
	7782-86-7	Mercurous Nitrate
	7787-55-5	Beryllium Nitrate
	10099-74-8	Lead Nitrate
	10102-06-4	Uranyl nitrate
	10102-45-1	Thallium Nitrate
	10415-75-5	Mercurous Nitrate
	10421-48-4	Ferric Nitrate
	13597-99-4	Beryllium Nitrate
	13746-89-9	Zirconium Nitrate
	14216-75-2	Nickel Nitrate
	36478-76-9	Uranyl Nitrate

<b>Polybrominated Biphenyls (PBBs)</b> Please see EPA guidance.		
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<b>Polychlorinated alkanes</b> Please see EPA guidance.		
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Chemical Category

CAS No.

Chemical Name

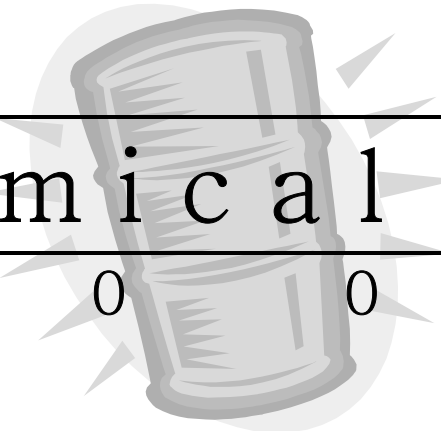
<b>Polycyclic Aromatic Compounds</b> Includes only the chemicals listed here.	50-32-8	Benzo(a)pyrene
	53-70-3	Dibenzo(a,h)anthracene
	56-49-5	3-Methylcholanthrene
	56-55-3	Benz(a)anthracene
	57-97-6	7,12-Dimethylbenz(a)anthracene
	189-55-9	Benzo(r,s)pentaphene
	189-64-0	Benzo(a,h)pyrene
	191-30-0	Dibenzo(a,l)pyrene
	192-65-4	Dibenzo(a,e)pyrene
	193-39-5	Indeno[1,2,3-cd]pyrene
	194-59-2	7H-Dibenzo(c,g)carbazole
	205-99-2	Benzo(b)fluoranthene
	205-82-3	Benzo(j)fluoranthene
	206-44-0	Benzo(j,k)fluorene
	207-08-9	Benzo(k)fluoranthene
	218-01-9	Benzo(a)phenanthrene
	224-42-0	Dibenz(a,j)acridine
	226-36-8	Dibenz(a,h)acridine
	3697-24-3	5-Methylchrysene
	5385-75-1	Dibenzo(a,e)Fluoranthene
	5522-43-0	1-Nitropyrene

<b>Selenium Compounds</b> Includes any unique chemical substance that contains selenium as part of the chemical's infrastructure. Includes, but is not limited to:	144-34-3	Carbamodithioic Acid, dimethyl-, Tetraanhydrosulfid with Orthothioselenious Acid
	630-10-4	Selenourea
	7446-08-4	Selenium Dioxide
	7488-56-4	Selenium sulfide
	7782-82-3	Sodium Selenite
	7783-00-8	Selenious Acid
	10102-18-8	Sodium Selenite
	12039-52-0	Selenious Acid, Dithallium (1+) Salt

<b>Silver Compounds</b> Includes any unique chemical substance that contains silver as part of the chemical's infrastructure. Includes, but is not limited to:	506-61-6	Potassium Silver Cyanide
	506-64-9	Silver Cyanide
	7761-88-8	Silver Nitrate

<b>Strychnine and Salts</b> Includes any unique chemical substance that contains strychnine or a strychnine salt as part of the chemical's infrastructure. Includes, but is not limited to:	57-24-9	Strychnine and Salts
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Chemical Category	CAS No.	Chemical Name
<b>Thallium compounds</b> Includes any unique chemical substance that contains thallium as part of the chemical's infrastructure. Includes, but is not limited to:	563-68-8	Thallium Acetate
	1314-32-5	Thallic Oxide
	6533-73-9	Thallous Carbonate
	7446-18-6	Thallium sulfate
	7791-12-0	Thallium Chloride
	10031-59-1	Thallium sulfate
	10102-45-1	Thallium Nitrate
	12039-52-0	Selenious Acid, dithallium (1+0 Salt
<b>Vanadium Compounds</b> Includes any unique chemical substance that contains vanadium as part of the chemical's infrastructure. Includes, but is not limited to:	1314-62-1	Vanadium Pentoxide
<b>Warfarin and Salts</b> Includes any unique chemical substance that contains warfarin or a warfarin salt as part of the chemical's infrastructure. Includes, but is not limited to:	81-81-2	Warfarin and Salts
<b>Zinc Compounds</b> Includes any unique chemical substance that contains zinc as part of the chemical's infrastructure. Includes, but is not limited to:	127-82-2	Zinc Phenolsulfonate
	137-30-4	Zinc, Bis(dimethylcarbomodithiato-S,S)-
	557-21-1	Zinc Cyanide
	557-34-6	Zinc Acetate
	557-41-5	Zinc Formate
	1314-84-7	Zinc Phosphide
	1332-07-6	Zinc Borate
	3486-35-9	Zinc Carbonate
	7646-85-7	Zinc Chloride
	7699-45-8	Zinc Bromide
	7720-78-7	Zinc Sulfate
	7779-86-4	Zinc Hydrosulfite
	7779-88-6	Zinc Nitrate
	7783-49-5	Zinc Fluoride
	14324-55-1	Zinc,Bis(diethylcarbomodithioato-S,S)-
	14639-97-5	Zinc Ammonium Chloride
	14639-98-6	Zinc Ammonium Chloride
	16871-71-9	Zinc Silicofluoride
	52628-25-8	Zinc Ammonium Chloride



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# C h e m i c a l   L i s t

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The Massachusetts Toxics Use Reduction Act, Reportable Chemical List for Calendar Year 2003

Sorted Alphabetically by Name

CAS	NAME	C	313	ADD
71751-41-2	<b>Abamectin</b>		<b>313</b>	<b>1995</b>
83-32-9	<b>Acenaphthene</b>	C		<b>1991</b>
208-96-8	<b>Acenaphthylene</b>	C		<b>1992</b>
30560-19-1	<b>Acephate</b>		<b>313</b>	<b>1995</b>
75-07-0	<b>Acetaldehyde</b>	C	<b>313</b>	<b>1990</b>
75-87-6	<b>Acetaldehyde, trichloro-</b>	C		<b>1991</b>
60-35-5	<b>Acetamide</b>	C	<b>313</b>	<b>1990</b>
64-19-7	<b>Acetic acid (concentrations of 12% or less are NOT reportable)</b>	C		<b>1991</b>
108-05-4	<b>Acetic acid ethenyl ester</b>	C	X	<b>1990</b>
94-75-7	<b>Acetic acid, (2,4-dichlorophenoxy)-</b>	C	X	<b>1990</b>
108-24-7	<b>Acetic anhydride</b>	C		<b>1991</b>
67-64-1	<b>Acetone</b>	C		<b>1990</b>
75-86-5	<b>Acetone cyanohydrin</b>	C	X	<b>1991</b>
75-05-8	<b>Acetonitrile</b>	C	<b>313</b>	<b>1990</b>
98-86-2	<b>Acetophenone</b>	C	<b>313</b>	<b>1991</b>
53-96-3	<b>2-Acetylaminofluorene</b>	C	<b>313</b>	<b>1990</b>
506-96-7	<b>Acetyl bromide</b>	C		<b>1992</b>
75-36-5	<b>Acetyl chloride</b>	C		<b>1991</b>
30560-19-1	<b>Acetylphosphoramidothioic acid O,S-dimethyl ester</b>		X	<b>1995</b>
591-08-2	<b>1-Acetyl-2-thiourea</b>	C		<b>1992</b>
62476-59-9	<b>Acifluorfen, sodium salt</b>		<b>313</b>	<b>1995</b>
107-02-8	<b>Acrolein</b>	C	<b>313</b>	<b>1990</b>
79-06-1	<b>Acrylamide</b>	C	<b>313</b>	<b>1990</b>
79-10-7	<b>Acrylic acid</b>	C	<b>313</b>	<b>1990</b>
107-13-1	<b>Acrylonitrile</b>	C	<b>313</b>	<b>1990</b>
124-04-9	<b>Adipic acid</b>	C		<b>1991</b>
15972-60-8	<b>Alachlor</b>		<b>313</b>	<b>1995</b>
116-06-3	<b>Aldicarb</b>	C	<b>313</b>	<b>1991</b>

CAS	NAME	C	313	ADD
309-00-2	<b>Aldrin</b>	C	<b>313</b>	<b>1990</b>
107-18-6	<b>Allyl alcohol</b>	C	<b>313</b>	<b>1990</b>
107-05-1	<b>Allyl chloride</b>	C	<b>313</b>	<b>1990</b>
107-11-9	<b>Allylamine</b>		<b>313</b>	<b>1995</b>
319-84-6	<b>alpha-BHC</b>	C	X	<b>1992</b>
88671-89-0	<b>alpha-Butyl-.alpha.-(4-chlorophenyl)-1H-1,2,4-triazole-1-propanenitrile</b>		X	<b>1995</b>
60168-88-9	<b>alpha-(2-Chlorophenyl)-.alpha.-4-chlorophenyl)-5-pyrimidinemethanol</b>		X	<b>1995</b>
959-98-8	<b>alpha - Endosulfan</b>	C		<b>1992</b>
319-84-6	<b>alpha-Hexachlorocyclohexane</b>	C	<b>313</b>	<b>1992</b>
134-32-7	<b>alpha-Naphthylamine</b>	C	<b>313</b>	<b>1990</b>
7429-90-5	<b>Aluminum (fume or dust)</b>		<b>313</b>	<b>1990</b>
1344-28-1	<b>Aluminum oxide (fibrous forms)</b>		<b>313</b>	<b>1990</b>
20859-73-8	<b>Aluminum phosphide</b>	C	<b>313</b>	<b>1993</b>
10043-01-3	<b>Aluminum sulfate</b>	C		<b>1993</b>
834-12-8	<b>Ametryn</b>		<b>313</b>	<b>1995</b>
117-79-3	<b>2-Aminoanthraquinone</b>		<b>313</b>	<b>1990</b>
60-09-3	<b>4-Aminoazobenzene</b>		<b>313</b>	<b>1990</b>
92-67-1	<b>4-Aminobiphenyl</b>	C	<b>313</b>	<b>1990</b>
82-28-0	<b>1-Amino-2-methylantraquinone</b>		<b>313</b>	<b>1990</b>
2763-96-4	<b>5-(Aminomethyl)-3-isoxazolol</b>	C		<b>1992</b>
504-24-5	<b>4-Aminopyridine</b>	C		<b>1992</b>
33089-61-1	<b>Amitraz</b>		<b>313</b>	<b>1995</b>
61-82-5	<b>Amitrole</b>	C	<b>313</b>	<b>1991</b>
7664-41-7	<b>Ammonia</b>	C	<b>313</b>	<b>1990</b>
631-61-8	<b>Ammonium acetate</b>	C		<b>1992</b>
1863-63-4	<b>Ammonium benzoate</b>	C		<b>1992</b>
1066-33-7	<b>Ammonium bicarbonate</b>	C		<b>1992</b>
2151-16-3	<b>Ammonium bichromate</b>	C	*	<b>1993</b>

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Sorted Alphabetically by Name

CAS	NAME	C	313	ADD
1341-49-7	Ammonium bifluoride	C		1992
10192-30-0	Ammonium bisulfite	C		1993
1111-78-0	Ammonium carbamate	C		1992
506-87-6	Ammonium carbonate	C		1992
12125-02-9	Ammonium chloride	C		1993
7788-98-9	Ammonium chromate	C	*	1993
3012-65-5	Ammonium citrate, dibasic	C		1992
13826-83-0	Ammonium fluoborate	C		1993
12125-01-8	Ammonium fluoride	C		1993
1336-21-6	Ammonium hydroxide	C		1992
5972-73-6	Ammonium oxalate	C		1992
6009-70-7	Ammonium oxalate	C		1992
14258-49-2	Ammonium oxalate	C		1993
131-74-8	Ammonium picrate	C		1991
16919-19-0	Ammonium silicofluoride	C		1993
7773-06-0	Ammonium sulfamate	C		1993
12135-76-1	Ammonium sulfide	C		1993
10196-04-0	Ammonium sulfite	C		1993
3164-29-2	Ammonium tartrate	C		1992
14307-43-8	Ammonium tartrate	C		1993
1762-95-4	Ammonium thiocyanate	C	*	1992
7803-55-6	Ammonium vanadate	C		1993
628-63-7	Amyl acetate	C		1992
101-05-3	Anilazine		313	1995
62-53-3	Aniline	C	313	1990
120-12-7	Anthracene	C	313	1990
7440-36-0	Antimony	C	313	1990
1000	Antimony Compounds	C	N010	

CAS	NAME	C	313	ADD
7647-18-9	Antimony pentachloride	C	*	1993
28300-74-5	Antimony potassium tartrate	C	*	1993
7789-61-9	Antimony tribromide	C	*	1993
10025-91-9	Antimony trichloride	C	*	1993
7783-56-4	Antimony trifluoride	C	*	1993
1309-64-4	Antimony trioxide	C	*	1992
86-88-4	Antu	C		1991
12674-11-2	Aroclor 1016	C		1993
11104-28-2	Aroclor 1221	C		1993
11141-16-5	Aroclor 1232	C		1993
53469-21-9	Aroclor 1242	C		1993
12672-29-6	Aroclor 1248	C		1993
11097-69-1	Aroclor 1254	C		1993
11096-82-5	Aroclor 1260	C		1993
7440-38-2	Arsenic	C	313	1990
1327-52-2	Arsenic acid	C	*	1992
7778-39-4	Arsenic acid	C	*	1993
1001	Arsenic Compounds	C	N020	
1303-32-8	Arsenic disulfide	C	*	1992
1303-28-2	Arsenic pentoxide	C	*	1992
1327-53-3	Arsenic trioxide	C	*	1992
1303-33-9	Arsenic trisulfide	C	*	1992
1327-53-3	Arsenous oxide	C		1992
7784-34-1	Arsenous trichloride	C	*	1993
1332-21-4	Asbestos (friable)	C	313	1990
1912-24-9	Atrazine		313	1995
492-80-8	Auramine	C	X	1990
71751-41-2	Avermectin B1		X	1995

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The Massachusetts Toxics Use Reduction Act, Reportable Chemical List for Calendar Year 2003

Sorted Alphabetically by Name

CAS	NAME	C	313	ADD
115-02-6	<b>Azaserine</b>	C		1991
86-50-0	<b>Azinphos-methyl</b>	C		1991
151-56-4	<b>Aziridine</b>	C	X	1990
75-55-8	<b>Aziridine, 2-methyl</b>	C	X	1990
7440-39-3	<b>Barium</b>		313	1990
1002	<b>Barium Compounds</b>		N040	
542-62-1	<b>Barium cyanide</b>	C	*	1992
22781-23-3	<b>Bendiocarb</b>		313	1995
1582-09-8	<b>Benezeneamine, 2,6-dinitro-N,N-dipropyl-4-(trifluoromethyl)-</b>	C	X	1990
1861-40-1	<b>Benfluralin</b>		313	1995
17804-35-2	<b>Benomyl</b>		313	1995
56-55-3	<b>Benz[a]anthracene</b>	C	313*	1991
225-51-4	<b>Benz[c]acridine</b>	C		1992
98-87-3	<b>Benzal chloride</b>	C	313	1990
55-21-0	<b>Benzamide</b>		313	1990
23950-58-5	<b>Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)</b>	C	X	1993
71-43-2	<b>Benzene</b>	C	313	1990
72-43-5	<b>Benzene, 1,1'-(2,2,2-trichloroethylidene)bis [4-methoxy-</b>	C	X	1990
91-08-7	<b>Benzene, 1,3-diisocyanato-2-methyl-</b>	C	X	1990
26471-62-5	<b>Benzene, 1,3-diisocyanatomethyl-</b>	C	X	1990
1836-75-5	<b>Benzene, 2,4-dichloro-1-(4-nitrophenoxy)-</b>		X	
584-84-9	<b>Benzene, 2,4-diisocyanato-1-methyl-</b>	C	X	1990
108-38-3	<b>Benzene, m-dimethyl-</b>	C	X	1990
95-47-6	<b>Benzene, o-dimethyl-</b>	C	X	1990
106-42-3	<b>Benzene, p-dimethyl-</b>	C	X	1990
510-15-6	<b>Benzeneacetic acid, 4-chloro-.alpha.-(4-chlorophenyl)-.alpha.-hydroxy-, ethyl ester</b>	C	X	

CAS	NAME	C	313	ADD
135-20-6	<b>Benzeneamine, N-hydroxy-N-nitroso, ammonium salt</b>		X	1990
1897-45-6	<b>1,3-Benzenedicarbonitrile, 2,4,5,6-tetrachloro-</b>		X	1990
122-09-8	<b>Benzeneethanamine, alpha, alpha-dimethyl-</b>	C		1991
115-32-2	<b>Benzenemethanol, 4-chloro-.alpha.-4-chlorophenyl)-.alpha.-(trichloromethyl)-</b>	C	X	1990
98-09-9	<b>Benzenesulfonyl chloride</b>	C		1991
108-98-5	<b>Benzenethiol</b>	C		1991
92-87-5	<b>Benzidine</b>	C	313	1990
218-01-9	<b>Benzo(a)phenanthrene</b>	C	313*	1992
22961-82-6	<b>1,3-Benzodioxol-4-ol, 2,2-dimethyl-, (bendiocarbphenol)</b>	C		
205-82-3	<b>Benzo(j)fluoranthene</b>		313*	1995
207-08-9	<b>Benzo(k)fluoranthene</b>	C	313*	1992
189-55-9	<b>Benzo(rst)pentaphene</b>	C	313*	1991
50-32-8	<b>Benzo[a]pyrene</b>	C	313*	1991
205-99-2	<b>Benzo[b]fluoranthene</b>	C	313*	1992
1563-38-8	<b>7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-(carbofuran phenol)</b>	C		
191-24-2	<b>Benzo[ghi]perylene</b>	C		1991
65-85-0	<b>Benzoic acid</b>	C		1991
57-64-7	<b>Benzoic Acid (Physostigminesalicylate)</b>	C		
133-90-4	<b>Benzoic acid, 3-amino-2,5-dichloro-</b>	C	X	1990
98-07-7	<b>Benzoic trichloride</b>	C	313	1990
100-47-0	<b>Benzonitrile</b>	C		1991
98-07-7	<b>Benzotrichloride</b>	C	X	1990
98-88-4	<b>Benzoyl chloride</b>	C	313	1990
94-36-0	<b>Benzoyl peroxide</b>		313	1990
100-44-7	<b>Benzyl chloride</b>	C	313	1990
7440-41-7	<b>Beryllium</b>	C	313	1990

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7787-47-5	Beryllium chloride	C	*	1993
1003	Beryllium Compounds	C	N050	
7787-49-7	Beryllium fluoride	C	*	1993
7787-55-5	Beryllium nitrate	C	*	1993
13597-99-4	Beryllium nitrate	C	*	1993
33213-65-9	beta - Endosulfan	C		1993
319-85-7	beta-BHC	C		1992
91-59-8	beta-Naphthylamine	C	313	1990
57-57-8	beta-Propiolactone	C	313	1990
82657-04-3	Bifenthrin		313	1995
1464-53-5	2,2'-Bioxirane	C	X	1990
92-52-4	Biphenyl	C	313	1990
108-60-1	Bis(2-chloro-1-methylethyl)ether	C	313	1990
111-91-1	Bis(2-chloroethoxy) methane	C	313	1991
111-44-4	Bis(2-chloroethyl) ether	C	313	1990
117-81-7	Bis(2-ethylhexyl)phthalate	C	X	1990
542-88-1	Bis(chloromethyl) ether	C	313	1990
97-74-5	Bis(dimethylthiocarbamoyl) sulfide (tetramethylthiurammonosulfide)	C		
38661-72-2	1,3-Bis(methylisocyanate)cyclohexane		313*	1995
10347-54-3	1,4-Bis(methylisocyanate)cyclohexane		313*	1995
56-35-9	Bis(tributyltin) oxide		313	1995
10294-34-5	Borane, trichloro-		X	1995
7637-07-2	Borane, trifluoro-		X	1995
10294-34-5	Boron trichloride		313	1995
7637-07-2	Boron trifluoride		313	1995
314-40-9	Bromacil		313	1995
53404-19-6	Bromacil, lithium salt		313	1995
7726-95-6	Bromine		313	1995

CAS	NAME	C	313	ADD
598-31-2	Bromoacetone	C		1992
35691-65-7	1-Bromo-1-(bromomethyl)-1,3-propanedicarbonitrile		313	1995
353-59-3	Bromochlorodifluoromethane		313	1992
75-25-2	Bromoform	C	313	1990
74-83-9	Bromomethane	C	313	1990
314-40-9	5-Bromo-6-methyl-3-(1-methylpropyl)-2,4-(1H,3H)-pyrimidinedione		X	1995
101-55-3	4-Bromophenyl phenyl ether	C		1991
75-63-8	Bromotrifluoromethane		313	1991
1689-84-5	Bromoxynil		313	1995
1689-99-2	Bromoxynil octanoate			313
52-51-7	Bronopol			X
357-57-3	Brucine	C	313	1992
106-99-0	1,3-Butadiene		C	313
78-79-5	1,3-Butadiene, 2-methyl-	C		1991
4170-30-3	2-Butenal	C	X	
123-73-9	2-Butenal, (e)-	C		1991
764-41-0	2-Butene, 1,4-dichloro-	C	X	1992
123-86-4	Butyl acetate	C		1991
141-32-2	Butyl acrylate		313	1990
85-68-7	Butyl benzyl phthalate	C		1990
109-73-9	Butylamine	C		1991
106-88-7	1,2-Butylene oxide	C	313	1990
1114-71-2	Butylethylcarbamothioic acid S-propyl ester		X	1995
123-72-8	Butyraldehyde		313	1990
107-92-6	Butyric acid	C		1991
4680-78-8	C.I. Acid Green 3		313	1990
6459-94-5	C.I. Acid Red 114		313	1995

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The Massachusetts Toxics Use Reduction Act, Reportable Chemical List for Calendar Year 2003

Sorted Alphabetically by Name

CAS	NAME	C	313	ADD
569-64-2	C.I. Basic Green 4		313	1990
989-38-8	C.I. Basic Red 1		313	1990
1937-37-7	C.I. Direct Black 38		313	1990
28407-37-6	C.I. Direct Blue 218		313	1995
2602-46-2	C.I. Direct Blue 6		313	1990
16071-86-6	C.I. Direct Brown 95		313	1990
2832-40-8	C.I. Disperse Yellow 3		313	1990
81-88-9	C.I. Food Red 15		313	1990
3761-53-3	C.I. Food Red 5		313	1990
3118-97-6	C.I. Solvent Orange 7		313	1990
842-07-9	C.I. Solvent Yellow 14		313	1990
97-56-3	C.I. Solvent Yellow 3		313	1990
492-80-8	C.I. Solvent Yellow 34	C	313	1990
128-66-5	C.I. Vat Yellow 4		313	1990
75-60-5	Cacodylic acid	C		1991
7440-43-9	Cadmium	C	313	1990
543-90-8	Cadmium acetate	C	*	1992
7789-42-6	Cadmium bromide	C	*	1993
10108-64-2	Cadmium chloride	C	*	1993
1004	Cadmium Compounds	C	N07 8	
7778-44-1	Calcium arsenate	C	*	1993
52740-16-6	Calcium arsenite	C	*	1993
75-20-7	Calcium carbide	C		1991
13765-19-0	Calcium chromate	C	*	1993
156-62-7	Calcium cyanamide	C	313	1990
592-01-8	Calcium cyanide	C	*	1992
26264-06-2	Calcium dodecylbenzenesulfonate	C		1993
7778-54-3	Calcium hypochlorite	C		1993

CAS	NAME	C	313	ADD
8001-35-2	Camphchlor	C	X	1990
8001-35-2	Camphene, octachloro-	C	X	1990
133-06-2	Captan	C	313	1990
55285-14-8	Carbamic acid, [(dibutylamino)thio]methyl-,2,3-dihydro-2,2-dimethyl-7-benzofuranyl ester(carbosulfan)	C		
10605-21-7	Carbamic acid, 1H-benzimidazol-2-yl,methyl ester (carbendazim)	C		
28249-77-6	Carbamic acid, diethylthio-, S-(p-chlorobenzyl)		X	1995
644-64-4	Carbamic acid, dimethyl-,1-[(dimethylamino)carbonyl]-5-methyl-1H-pyrazol-3-yl ester(Dimetilan)	C		
51-79-6	Carbamic acid, ethyl ester	C	X	1990
1129-41-5	Carbamic acid, methyl- 3-methylphenyl ester (metolcarb)	C		
122-42-9	Carbamic acid, phenyl-, 1-methylethyl ester (propham)	C		
119-38-0	Carbamic acid,dimethyl-, 3-methyl-1-(1-methylethyl)-1H-pyrazol-5-yl ester (isolan)	C		
101-27-9	Carbamic, (3-chlorophenyl)-,4-chloro-2-butynyl ester(barban)	C		
51026-28-9	Carbamodithioic acid, (hydroxymethyl)methyl-,monopotassium salt (potassium n-hydroxymethyl-n-methyldithiocarbamate)	C		
12427-38-2	Carbamodithioic acid, 1,2-ethanediylbis-, manganese complex		X	
12122-67-7	Carbamodithioic acid, 1,2-ethanediylbis-, zinc complex		X	1990
136-30-1	Carbamodithioic acid, dibutyl, sodium salt (Sodium dibutyldithiocarbamate)	C		
95-06-7	Carbamodithioic acid, diethyl-, 2-chloro-2-propenyl ester(sulfallate)	C		

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CAS	NAME	C	313	ADD
148-18-5	Carbamodithioic acid, diethyl-,sodium salt (sodium diethyldithiocarbamate)	C		
144-34-3	Carbamodithioic acid, dimethyl-, tetraanhydrosulfid with orthothioselenious acid(selenium, tetrakis(dimethyldithiocarbamate))	C	*	
2303-16-4	Carbamothioic acid, bis(1-methylethyl)-S-(2,3-dichloro-2-propenyl)ester	C	X	
2008-41-5	Carbamothioic acid, bis(2-methylpropyl)-, S-ethyl ester (butylate)	C		
52888-80-9	Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester (prosulfocarb)	C		
1929-77-7	Carbamothioic acid, dipropyl-, S-propyl ester (vemolate)	C		
63-25-2	Carbaryl	C	313	1990
1563-66-2	Carbofuran	C	313	1992
52888-80-9	Carbomothioic acid, dipropyl-, S-(phenylmethyl) ester (prosulfocarb)	C		
75-15-0	Carbon disulfide	C	313	1990
463-58-1	Carbon oxide sulfide (COS)	C	X	1990
56-23-5	Carbon tetrachloride	C	313	1990
75-44-5	Carbonic dichloride	C	X	1990
353-50-4	Carbonic difluoride	C		1992
79-22-1	Carbonochloridic acid, methylester	C	X	1991
463-58-1	Carbonyl sulfide	C	313	1990
5234-68-4	Carboxin		313	1995
120-80-9	Catechol	C	313	1990
75-69-4	CFC-11	C	X	1991
76-14-2	CFC-114		X	1991
76-15-3	CFC-115		X	1991
75-71-8	CFC-12	C	X	1991
75-72-9	CFC-13		X	1995

CAS	NAME	C	313	ADD
2439-01-2	Chinomethionat		313	1995
133-90-4	Chloramben	C	313	1990
305-03-3	Chlorambucil	C		1992
57-74-9	Chlordane	C	313	1990
1005	Chlordane (Technical Mixture and Metabolites)	C		
115-28-6	Chlorendic acid		313	1995
90982-32-4	Chlorimuron ethyl		313	1995
1006	Chlorinated Benzenes	C		
1007	Chlorinated Ethanes	C		
1008	Chlorinated Naphthalene	C		
1009	Chlophenols	C	N08 4	
7782-50-5	Chlorine	C	313	1990
10049-04-4	Chlorine dioxide		313	1990
10049-04-4	Chlorine oxide (ClO2)		X	1990
494-03-1	Chlornaphazine	C		1992
107-20-0	Chloroacetaldehyde	C		1991
79-11-8	Chloroacetic acid	C	313	1990
532-27-4	2-Chloroacetophenone	C	313	1990
1011	Chloroalkyl Ethers	C		
4080-31-3	1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride		313	1995
51630-58-1	4-Chloro-alpha-(1-methylethyl)benzeneacetic acid cyano(3-phenoxyphenyl)methyl ester		X	1995
108-90-7	Chlorobenzene	C	313	1990
510-15-6	Chlorobenzilate	C	313	1990
66441-23-4	2-(4-((6-Chloro-2-benzoxazolylen)oxy)phenoxy)propanoic acid, ethyl ester		X	1995

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CAS	NAME	C	313	ADD
124-48-1	Chlorodibromomethane	C		1991
75-68-3	1-Chloro-1,1-difluoroethane		313	
75-45-6	Chlorodifluoromethane		313	
5902-51-2	5-Chloro-3-(1,1-dimethylethyl)-6-methyl-2,4(1H,3H)-pyrimidinedione		X	1995
75-00-3	Chloroethane	C	313	1990
110-75-8	2-Chloroethyl vinyl ether	C		1991
67-66-3	Chloroform	C	313	1990
74-87-3	Chloromethane	C	313	1990
27314-13-2	4-Chloro-5-(methylamino)-2-[3-(trifluoromethyl)phenyl]-3(2H)-pyridazinone		X	1995
542-88-1	Chloromethyl ether	C	X	1990
107-30-2	Chloromethyl methyl ether	C	313	1990
3653-48-3	(4-Chloro-2-methylphenoxy) acetate sodium salt		X	1995
94-74-6	(4-Chloro-2-methylphenoxy) acetic acid		X	1995
563-47-3	3-Chloro-2-methyl-1-propene		313	1995
91-58-7	2-Chloronaphthalene	C		1991
51-75-2	2-Chloro-N-(2-chloroethyl)-N-methylethanamine		X	1990
1912-24-9	6-Chloro-N-ethyl-N'-(1-methylethyl)-1,3,5-triazine-2,4-diamine		X	1995
64902-72-3	2-Chloro-N-(((4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino)carbonyl)benzenesulfonamide		X	1995
1918-16-7	2-Chloro-N-(1-methylethyl)-N-phenylacetamide		X	1995
95-57-8	2-Chlorophenol	C	*	1991
	Chlorophenols	C	N084	
43121-43-3	1-(4-Chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-2-butanone		X	1995

CAS	NAME	C	313	ADD
76-06-2	Chloropicrin		313	1995
126-99-8	Chloroprene	C	313	1990
76578-14-8	2-(4-((6-Chloro-2-quinoxalinyloxy)phenoxy)propanoic acid ethyl ester		X	1995
3165-93-3	4-Chloro-o-toluidine, hydrochloride	C		1992
7005-72-3	4-Chlorophenyl phenyl ether	C	*	1992
542-76-7	3-Chloropropionitrile	C	313	1992
7790-94-5	Chlorosulfonic acid	C		1993
63938-10-3	Chlorotetrafluoroethane		313	
354-25-6	1-Chloro-1,1,2,2-tetrafluoroethane		313	
2837-89-0	2-Chloro-1,1,1,2-tetrafluoroethane		313	
1897-45-6	Chlorothalonil		313	1990
1929-82-4	2-Chloro-6-(trichloromethyl)pyridine		X	1995
75-88-7	2-Chloro-1,1,1-trifluoroethane		313	1995
75-72-9	Chlorotrifluoromethane		313	1995
77501-63-4	5-(2-Chloro-4-(trifluoromethyl)phenoxy)-2-nitro-2-ethoxy-1-methyl-2-oxoethyl ester		X	1995
62476-59-9	5-(2-Chloro-4-(trifluoromethyl)phenoxy)-2-nitrobenzoic acid, sodium salt		X	1995
72178-02-0	5-(2-Chloro-4-(trifluoromethyl)phenoxy)-N-methylsulfonyl-2-nitrobenzamide		X	1995
460-35-5	3-Chloro-1,1,1-trifluoropropane		313	1995
68085-85-8	3-(2-Chloro-3,3,3-trifluoro-1-propenyl)-2,2-Dimethylcyclopropanecarboxylic acid cyano(3-phenoxyphenyl) methyl ester	X	1995	
2921-88-2	Chlorpyrifos	C		1992
5598-13-0	Chlorpyrifos methyl		313	1995
64902-72-3	Chlorsulfuron		313	1995
1066-30-4	Chromic acetate	C	*	1992
7738-94-5	Chromic acid	C	*	1993
11115-74-5	Chromic acid	C	*	1993

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10101-53-8	<b>Chromic sulfate</b>	C	*	1993
7440-47-3	<b>Chromium</b>	C	313	1990
1012	<b>Chromium Compounds</b>	C	N090	
10049-05-5	<b>Chromous chloride</b>	C	*	1993
218-01-9	<b>Chrysene</b>	C	X*	1992
7440-48-4	<b>Cobalt</b>		313	1990
1013	<b>Cobalt Compounds</b>	C	N096	
7789-43-7	<b>Cobaltous bromide</b>	C	*	1993
544-18-3	<b>Cobaltous formate</b>	C	*	1992
14017-41-5	<b>Cobaltous sulfamate</b>	C	*	1993
1014	<b>Coke Oven Emissions</b>	C		
7440-50-8	<b>Copper – reportable to EPA ONLY</b>		313	1990
1015	<b>Copper Compounds</b>	C	N100	
544-92-3	<b>Copper cyanide</b>	C	*	1992
137-29-1	<b>Copper, bis(dimethylcarbamodithioato-S-S)-(copper dimethyldithiocarbamate)</b>	C	*	
56-72-4	<b>Coumaphos</b>	C		1991
8001-58-9	<b>Creosote</b>	C	313	1990
1319-77-3	<b>Cresol (mixed isomers)</b>	C	313	1990
4170-30-3	<b>Crotonaldehyde</b>	C	313	1992
123-73-9	<b>Crotonaldehyde, (E)-</b>	C		1991
98-82-8	<b>Cumene</b>	C	313	1990
80-15-9	<b>Cumene hydroperoxide</b>	C	313	1990
135-20-6	<b>Cupferron</b>		313	1990
142-71-2	<b>Cupric acetate</b>	C		1991
12002-03-8	<b>Cupric acetoarsenite</b>	C		1993
7447-39-4	<b>Cupric chloride</b>	C		1992

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3251-23-8	<b>Cupric nitrate</b>	C	*	1992
5893-66-3	<b>Cupric oxalate</b>	C	*	1992
7758-98-7	<b>Cupric sulfate</b>	C	*	1993
10380-29-7	<b>Cupric sulfate, ammoniated</b>	C	*	1993
815-82-7	<b>Cupric tartrate</b>	C	*	1992
21725-46-2	<b>Cyanazine</b>		313	1995
1016	<b>Cyanide Compounds</b>	C	N106	
57-12-5	<b>Cyanides (soluble salts and complexes)</b>	C	*	1991
460-19-5	<b>Cyanogen</b>	C	*	1992
506-68-3	<b>Cyanogen bromide</b>	C	*	1992
506-77-4	<b>Cyanogen chloride</b>	C	*	1992
506-77-4	<b>Cyanogen chloride ((CN)Cl)</b>	C	*	1992
1134-23-2	<b>Cycloate</b>		313	1995
68-76-8	<b>2,5-Cyclohexadiene-1,4-dione, 2,3,5-tris(1-aziridinyl)-</b>		X	1990
110-82-7	<b>Cyclohexane</b>	C	313	1990
2556-36-7	<b>1,4-Cyclohexane diisocyanate</b>		313*	1995
58-89-9	<b>Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1.alpha.,2.alpha.,3.beta.,4.alpha.,5.alpha.,6.beta.)-</b>	C	X	1990
108-93-0	<b>Cyclohexanol</b>		313	1995
108-94-1	<b>Cyclohexanone</b>	C		1991
131-89-5	<b>2-Cyclohexyl-4,6-dinitrophenol</b>	C		1991
50-18-0	<b>Cyclophosphamide</b>	C		1991
68359-37-5	<b>Cyfluthrin</b>		313	1995
68085-85-8	<b>Cyhalothrin</b>		313	1995
94-75-7	<b>2,4-D</b>	C	313	1990
20830-81-3	<b>Daunomycin</b>	C		1993
533-74-4	<b>Dazomet</b>		313	1995

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CAS	NAME	C	313	ADD
53404-60-7	Dazomet, sodium salt		313	1995
94-75-7	2,4-D Acid	C	X	1990
94-82-6	2,4-DB		313	1995
96-12-8	DBCP	C	X	1990
1929-73-3	2,4-D butoxyethyl ester	C	313	1992
94-80-4	2,4-D butyl ester	C	313	1991
2971-38-2	2,4-D chlorocrotyl ester	C	313	1992
72-54-8	DDD	C		1991
72-55-9	DDE	C		1991
3547-04-4	DDE	C		
3547-04-4	DDET	C		
50-29-3	DDT	C		1991
1017	DDT and Metabolites	C		
1163-19-5	Decabromodiphenyl oxide		313	1990
78-48-8	DEF		X	1995
117-81-7	DEHP	C	X	1990
319-86-8	delta-BHC	C		1992
13684-56-5	Desmedipham		313	1995
94-11-1	2,4-D Esters	C	X	1991
94-79-1	2,4-D Esters	C		1991
94-80-4	2,4-D Esters	C	X	1991
1320-18-9	2,4-D Esters	C	X	1992
1928-38-7	2,4-D Esters	C		1992
1928-61-6	2,4-D Esters	C		1992
1929-73-3	2,4-D Esters	C	X	1992
2971-38-2	2,4-D Esters	C	X	1992
25168-26-7	2,4-D Esters	C		1993
53467-11-1	2,4-D Esters	C		1993
1928-43-4	2,4-D 2-ethylhexyl ester		313	1995

CAS	NAME	C	313	ADD
53404-37-8	2,4-D 2-ethyl-4-methylpentyl ester		313	1995
18883-66-4	D-Glucose, 2-deoxy-2-[[ (methylnitrosoamino)-carbo	C		1993
117-81-7	Di(2-ethylhexyl) phthalate	C	313	1990
2303-16-4	Diallate	C	313	1990
615-05-4	2,4-Diaminoanisole		313	1990
39156-41-7	2,4-Diaminoanisole sulfate		313	1990
101-80-4	4,4'-Diaminodiphenyl ether		313	1990
496-72-0	Diaminotoluene	C		1992
823-40-5	Diaminotoluene	C		1992
25376-45-8	Diaminotoluene (mixed isomers)	C	313	1990
95-80-7	2,4-Diaminotoluene	C	313	1990
333-41-5	Diazinon	C	313	1992
334-88-3	Diazomethane	C	313	1990
226-36-8	Dibenz(a,h)acridine		313*	1995
224-42-0	Dibenz(a,j)acridine		313*	1995
53-70-3	Dibenz[a,h]anthracene	C	313*	1991
189-55-9	Dibenz[a,i]pyrene	C	X*	1991
5385-75-1	Dibenzo(a,e)fluoranthene		313*	1995
192-65-4	Dibenzo(a,e)pyrene		313*	1995
189-64-0	Dibenzo(a,h)pyrene		313*	1995
191-30-0	Dibenzo(a,l)pyrene		313*	1995
132-64-9	Dibenzofuran	C	313	1990
96-12-8	1,2-Dibromo-3-chloropropane	C	313	1990
106-93-4	1,2-Dibromoethane	C	313	1990
1689-84-5	3,5-Dibromo-4-hydroxybenzonitrile		X	1995
124-73-2	Dibromotetrafluoroethane		313	1991
10222-01-2	2,2-Dibromo-3-nitrilopropionamide		313	1995
84-74-2	Dibutyl phthalate	C	313	1990

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1918-00-9	<b>Dicamba</b>	C	313	1992
1194-65-6	<b>Dichlobenil</b>	C		1992
117-80-6	<b>Dichlone</b>	C		1991
99-30-9	<b>Dichloran</b>		313	1995
52645-53-1	<b>3-(2,2-Dichloroethenyl)-2,2-dimethylcyclopropane carboxylic acid, (3-phenoxy-phenyl)methyl ester</b>		X	1995
68359-37-5	<b>3-(2,2-Dichloroethenyl)-2,2-dimethylcyclopropanecarboxylic acid, cyano(4-fluoro-3-phenoxyphenyl)methyl ester</b>		X	
25321-22-6	<b>Dichlorobenzene</b>	C	X	1990
25321-22-6	<b>Dichlorobenzene (mixed isomers)</b>	C	313	1990
95-50-1	<b>1,2-Dichlorobenzene</b>	C	313	1990
541-73-1	<b>1,3-Dichlorobenzene</b>	C	313	1990
106-46-7	<b>1,4-Dichlorobenzene</b>	C	313	1990
1018	<b>Dichlorobenzidine</b>	C		
91-94-1	<b>3,3'-Dichlorobenzidine</b>	C	313	1990
612-83-9	<b>3,3'-Dichlorobenzidine dihydrochloride</b>		313	1995
64969-34-2	<b>3,3'-Dichlorobenzidine sulfate</b>		313	1995
75-27-4	<b>Dichlorobromomethane</b>	C	313	1990
764-41-0	<b>1,4-Dichloro-2-butene</b>	C	313	1992
1717-00-6	<b>1,1-Dichloro-1-fluoroethane</b>		313	
1649-08-7	<b>1,2-Dichloro-1,1-difluoroethane</b>		313	1995
75-71-8	<b>Dichlorodifluoromethane</b>	C	313	1991
75-34-3	<b>1,1-Dichloroethane</b>	C	X	1991
107-06-2	<b>1,2-Dichloroethane</b>	C	313	1990
75-35-4	<b>1,1-Dichloroethylene</b>	C	X	1990
156-60-5	<b>1,2-Dichloroethylene</b>	C		1991
540-59-0	<b>1,2-Dichloroethylene</b>		313	1990

CAS	NAME	C	313	ADD
111-44-4	<b>Dichloroethyl ether</b>	C	X	1990
75-43-4	<b>Dichlorofluoromethane</b>		313	
108-60-1	<b>Dichloroisopropyl ether</b>	C	X	1990
75-09-2	<b>Dichloromethane</b>	C	313	1990
1918-00-9	<b>3,6-Dichloro-2-methoxybenzoic acid</b>	C	X	1992
1982-69-0	<b>3,6-Dichloro-2-methoxybenzoic acid, sodium salt</b>		X	1995
542-88-1	<b>Dichloromethyl ether</b>	C	X	1990
19666-30-9	<b>3-(2,4-Dichloro-5-(1-methylethoxy)phenyl)-5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2(3H)-one</b>		X	1995
101-05-3	<b>4,6-Dichloro-N-(2-chlorophenyl)-1,3,5-triazin-2-amine</b>		X	1995
99-30-9	<b>2,6-Dichloro-4-nitroaniline</b>		X	1995
422-56-0	<b>3,3-Dichloro-1,1,1,2,2-pentafluoropropane</b>		313	1995
507-55-1	<b>1,3-Dichloro-1,1,2,2,3-pentafluoropropane</b>		313	1995
136013-79-1	<b>1,3-Dichloro-1,1,2,3,3-pentafluoropropane</b>		313	1995
422-48-0	<b>2,3-Dichloro-1,1,1,2,3-pentafluoropropane</b>		313	1995
120-83-2	<b>2,4-Dichlorophenol</b>	C	313	1990
50471-44-8	<b>3-(3,5-Dichlorophenyl)-5-ethenyl-5-methyl-2,4-oxazolidinedione</b>		X	1995
35554-44-0	<b>1-(2-(2,4-Dichlorophenyl)-2-(2-propenyloxy)ethyl)-1H-imidazole</b>		X	1995
75-99-0	<b>2,2-Dichloropropionic acid</b>	C		1991
60207-90-1	<b>1-(2-(2,4-Dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl)-methyl-1H-1,2,4-triazole</b>		X	1995
127564-92-5	<b>Dichloropentafluoropropane</b>		313	1995
13474-88-9	<b>1,1-Dichloro-1,2,2,3,3-pentafluoropropane</b>		313	1995
111512-56-2	<b>1,1-Dichloro-1,2,3,3,3-pentafluoropropane</b>		313	1995
422-44-6	<b>1,2-Dichloro-1,1,2,3,3-pentafluoropropane</b>		313	1995
431-86-7	<b>1,2-Dichloro-1,1,3,3,3-pentafluoropropane</b>		313	1995

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CAS	NAME	C	313	ADD
542-88-1	Dichloromethyl ether	C	X	1990
97-23-4	Dichlorophene		313	1995
87-65-0	2,6-Dichlorophenol	C	*	1991
51338-27-3	2-(4-(2,4-Dichlorophenoxy)phenoxy)propanoic acid, methyl ester		X	1995
696-28-6	Dichlorophenylarsine	C	*	1992
20354-26-1	2-(3,4-Dichlorophenyl)-4-methyl-1,2,4-oxadiazolidine-3,5-dione		X	1995
26638-19-7	Dichloropropane	C		1993
78-99-9	1,1-Dichloropropane	C		1991
78-87-5	1,2-Dichloropropane	C	313	1990
142-28-9	1,3-Dichloropropane	C		1991
542-75-6	1,3-Dichloropropene	C	X	1990
8003-19-8	Dichloropropane - Dichloropropene (mixture)	C		1993
26952-23-8	Dichloropropene	C		
78-88-6	2,3-Dichloropropene	C	313	1990
542-75-6	1,3-Dichloropropylene	C	313	1990
76-14-2	Dichlorotetrafluoroethane		313	1991
34077-87-7	Dichlorotrifluoroethane		313	
90454-18-5	Dichloro-1,1,2-trifluoroethane		313	
812-04-4	1,1-Dichloro-1,2,2-trifluoroethane		313	
306-83-2	2,2-Dichloro-1,1,1-trifluoroethane		313	
354-23-4	1,2-Dichloro-1,1,2-trifluoroethane		313	
62-73-7	Dichlorvos	C	313	1990
51338-27-3	Diclofop methyl		313	1995
115-32-2	Dicofol	C	313	1990
77-73-6	Dicyclopentadiene		313	1995
60-57-1	Dieldrin	C		1991

CAS	NAME	C	313	ADD
1464-53-5	Diepoxybutane	C	313	1990
111-42-2	Diethanolamine	C	313	1990
38727-55-8	Diethyl ethyl		313	1995
84-66-2	Diethyl phthalate	C	313	1990
64-67-5	Diethyl sulfate	C	313	1990
109-89-7	Diethylamine	C		1991
692-42-2	Diethylarsine	C	*	1992
134190-37-7	Diethyldiisocyanatobenzene		313*	1995
311-45-5	Diethyl-p-nitrophenyl phosphate	C		1992
56-53-1	Diethylstilbestrol	C		1991
35367-38-5	Diflubenzuron		313	1995
101-90-6	Diglycidyl resorcinol ether		313	1995
55290-64-7	2,3,-Dihydro-5,6-dimethyl-1,4-dithiin 1,1,4,4-tetraoxide		X	1995
5234-68-4	5,6-Dihydro-2-methyl-N-phenyl-1,4-oxathiin-3-carboxamide		X	1995
94-58-6	Dihydrosafrole	C	313	1991
1050	Diisocyanates (includes only 20 chemicals)		N120	
4128-73-8	4,4'-Diisocyanatodiphenyl ether		313	1995
75790-87-3	2,4'-Diisocyanatodiphenyl sulfide		313*	1995
55-91-4	Diisopropylfluorophosphate	C		1991
309-00-2	1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-(1.alpha.,4.alpha.,4a.beta.,5.alpha.,8.alpha.,8a.beta.)-	C	X	1990
55290-64-7	Dimethipin		313	1995
60-51-5	Dimethoate	C	313	1991
119-90-4	3,3'-Dimethoxybenzidine	C	313	1990
20325-40-0	3,3'-Dimethoxybenzidine dihydrochloride		313	1995

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111984-09-9	<b>3,3'-Dimethoxybenzidine hydrochloride</b>		<b>313</b>	<b>1995</b>
91-93-0	<b>3,3'-Dimethoxybenzidine-4,4'-diisocyanate</b>		<b>313*</b>	<b>1995</b>
2300-66-5	<b>Dimethylamine dicamba</b>		<b>313</b>	<b>1995</b>
124-40-3	<b>Dimethylamine</b>	C	<b>313</b>	<b>1991</b>
60-11-7	<b>4-Dimethylaminoazobenzene</b>	C	<b>313</b>	<b>1990</b>
60-11-7	<b>Dimethylaminoazobenzene</b>	C	X	<b>1990</b>
57-97-6	<b>7,12-Dimethylbenz[a]anthracene</b>	C	<b>313*</b>	<b>1991</b>
119-93-7	<b>3,3'-Dimethylbenzidine</b>	C	<b>313</b>	<b>1990</b>
612-82-8	<b>3,3'-Dimethylbenzidine dihydrochloride</b>		<b>313</b>	<b>1995</b>
41766-75-0	<b>3,3'-Dimethylbenzidine dihydrofluoride</b>		<b>313</b>	<b>1995</b>
22781-23-3	<b>2,2-Dimethyl-1,3-benzodioxol-4-ol methylcarbamate</b>		X	<b>1995</b>
79-44-7	<b>Dimethylcarbamyl chloride</b>	C	<b>313</b>	<b>1990</b>
2524-03-0	<b>Dimethyl chlorothiophosphate</b>		<b>313</b>	<b>1995</b>
91-97-4	<b>3,3'-Dimethyl-4,4'-diphenylene diisocyanate</b>		<b>313*</b>	<b>1995</b>
139-25-3	<b>3,3'-Dimethyldiphenylmethane-4,4'-diisocyanate</b>		<b>313*</b>	<b>1995</b>
68-12-2	<b>Dimethylformamide</b>	C	X	<b>1995</b>
57-14-7	<b>Dimethylhydrazine</b>	C	X	<b>1990</b>
57-14-7	<b>1,1-Dimethyl hydrazine</b>	C	<b>313</b>	<b>1990</b>
7696-12-0	<b>2,2-Dimethyl-3-(2-methyl-1-propenyl)cyclopropanecarboxylic acid (1,3,4,5,6,7-hexahydro-1,3-dioxo-2H-isoindol-2-yl)methyl ester</b>	X	<b>1995</b>	
26002-80-2	<b>2,2-Dimethyl-3-(2-methyl-1-propenyl)cyclopropanecarboxylic acid (3-phenoxyphenyl)methyl ester</b>		X	<b>1995</b>
105-67-9	<b>2,4-Dimethylphenol</b>	C	<b>313</b>	<b>1990</b>
2524-03-0	<b>Dimethyl phosphorochloridothioate</b>		X	<b>1995</b>
131-11-3	<b>Dimethyl phthalate</b>	C	<b>313</b>	<b>1990</b>
77-78-1	<b>Dimethyl sulfate</b>	C	<b>313</b>	<b>1990</b>

CAS	NAME	C	313	ADD
25154-54-5	<b>Dinitrobenzene (mixed isomers)</b>	C		<b>1993</b>
88-85-7	<b>Dinitrobutyl phenol</b>	C	<b>313</b>	<b>1991</b>
534-52-1	<b>Dinitrocresol</b>	C	X	<b>1992</b>
329-71-5	<b>2,5-Dinitrophenol</b>	C		<b>1992</b>
573-56-8	<b>2,6-Dinitrophenol</b>	C		<b>1992</b>
606-20-2	<b>2,6-Dinitrotoluene</b>	C	<b>313</b>	<b>1990</b>
534-52-1	<b>4,6-Dinitro-o-cresol</b>	C	<b>313</b>	<b>1990</b>
534-52-1	<b>4,6-Dinitro-o-cresol and salts</b>	C		<b>1992</b>
25550-58-7	<b>Dinitrophenol</b>	C		<b>1993</b>
51-28-5	<b>2,4-Dinitrophenol</b>	C	<b>313</b>	<b>1990</b>
121-14-2	<b>2,4-Dinitrotoluene</b>	C	<b>313</b>	<b>1990</b>
610-39-9	<b>3,4-Dinitrotoluene</b>	C		<b>1992</b>
25321-14-6	<b>Dinitrotoluene (mixed isomers)</b>	C	<b>313</b>	<b>1990</b>
117-84-0	<b>Di-n-octyl phthalate</b>	C		<b>1990</b>
39300-45-3	<b>Dinocap</b>		<b>313</b>	<b>1995</b>
88-85-7	<b>Dinoseb</b>	C	X	<b>1991</b>
621-64-7	<b>Di-n-propylnitrosamine</b>	C	X	<b>1990</b>
123-91-1	<b>1,4-Dioxane</b>	C	<b>313</b>	<b>1990</b>
1060	<b>Dioxin and Dioxin like Compounds</b>		<b>313</b>	
957-51-7	<b>Diphenamid</b>		<b>313</b>	
122-39-4	<b>Diphenylamine</b>		<b>313</b>	<b>1995</b>
1019	<b>Diphenylhydrazine</b>	C		
122-66-7	<b>1,2-Diphenylhydrazine</b>	C	<b>313</b>	<b>1990</b>
152-16-9	<b>Diphosphoramidate, octamethyl-</b>	C		<b>1991</b>
2164-07-0	<b>Dipotassium endothall</b>		<b>313</b>	<b>1995</b>
136-45-8	<b>Dipropyl isocinchomeronate</b>		<b>313</b>	<b>1995</b>
142-84-7	<b>Dipropylamine</b>	C		<b>1991</b>
19044-88-3	<b>4-(Dipropylamino)-3,5-dinitrobenzenesulfonamide</b>		X	<b>1995</b>

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85-00-7	<b>Diquat</b>	C		<b>1991</b>
2764-72-9	<b>Diquat</b>	C		<b>1992</b>
138-93-2	<b>Disodium cyanodithioimidocarbonate</b>		<b>313</b>	<b>1995</b>
94-11-1	<b>2,4-D isopropyl ester</b>	C	<b>313</b>	<b>1991</b>
298-04-4	<b>Disulfoton</b>	C		<b>1992</b>
541-53-7	<b>Dithiobiuret</b>	C	X	<b>1992</b>
541-53-7	<b>2,4-Dithiobiuret</b>	C	<b>313</b>	<b>1992</b>
26419-73-8	<b>1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-,O- [(methylamino)carbonyl]oxime (tripate)</b>	C		
330-54-1	<b>Diuron</b>	C	<b>313</b>	<b>1992</b>
27176-87-0	<b>Dodecylbenzenesulfonic acid</b>	C		<b>1993</b>
2439-10-3	<b>Dodecylguanidine monoacetate</b>		X	<b>1995</b>
2439-10-3	<b>Dodine</b>		<b>313</b>	<b>1995</b>
120-36-5	<b>2,4-DP</b>		<b>313</b>	<b>1995</b>
1320-18-9	<b>2,4-D propylene glycol butyl ether ester</b>	C	<b>313</b>	<b>1992</b>
94-75-7	<b>2,4-D, salts and esters</b>	C		<b>1991</b>
2702-72-9	<b>2,4-D sodium salt</b>		<b>313</b>	<b>1995</b>
28057-48-9	<b>d-trans-Allethrin</b>		<b>313</b>	<b>1995</b>
28057-48-9	<b>d-trans-Chrysanthemic acid of d-allethrine</b>		X	<b>1995</b>
115-29-7	<b>Endosulfan</b>	C		<b>1991</b>
1020	<b>Endosulfan and Metabolites</b>	C		
1031-07-8	<b>Endosulfan sulfate</b>	C		<b>1992</b>
145-73-3	<b>Endothall</b>	C		<b>1991</b>
72-20-8	<b>Endrin</b>	C		<b>1991</b>
7421-93-4	<b>Endrin aldehyde</b>	C		<b>1992</b>
1021	<b>Endrin and Metabolites</b>	C		
106-89-8	<b>Epichlorohydrin</b>	C	<b>313</b>	<b>1990</b>
51-43-4	<b>Epinephrine</b>	C		<b>1991</b>
759-94-4	<b>EPTC</b>		X	<b>1995</b>

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75-04-7	<b>Ethanamine</b>	C		<b>1991</b>
107-15-3	<b>1,2-Ethanediamine</b>	C		<b>1991</b>
630-20-6	<b>Ethane, 1,1,1,2-tetrachloro-</b>	C	X	<b>1992</b>
76-13-1	<b>Ethane, 1,1,2-trichloro-1,2,2,-trifluoro-</b>		X	<b>1990</b>
60-29-7	<b>Ethane, 1,1'-oxybis-</b>	C		<b>1991</b>
505-60-2	<b>Ethane, 1,1'-thiobis[2-chloro-</b>		X	<b>1990</b>
75-00-3	<b>Ethane, chloro-</b>	C	X	<b>1990</b>
460-19-5	<b>Ethanedinitrile</b>	C		<b>1992</b>
79-21-0	<b>Ethaneperoxoic acid</b>		X	<b>1990</b>
30558-43-1	<b>Ethanimidothioci acid, 2-(dimethylamino-n-hydroxy-2-oxo-, methyl ester (A2213)</b>	C		
16752-77-5	<b>Ethanimidothioci acid, N-[[methylamino)carbonyl]</b>	C		<b>1993</b>
23135-22-0	<b>Ethanimidothioci acid, 2-(dimethylamino)-N-[[[(methylamino)carbonyl]oxy]-2-oxo-, methyl ester (oxamyl)</b>	C		
110-80-5	<b>Ethanol, 2-ethoxy-</b>	C	X	<b>1990</b>
5952-26-1	<b>Ethanol,2,2-oxybis,dicarbamate (diethylene glycol,dicarbamate)</b>	C		
74-85-1	<b>Ethene</b>		X	<b>1990</b>
75-35-4	<b>Ethene, 1,1-dichloro-</b>	C	X	<b>1990</b>
75-01-4	<b>Ethene, chloro-</b>		X	<b>1990</b>
563-12-2	<b>Ethion</b>	C		<b>1992</b>
13194-48-4	<b>Ethoprop</b>		<b>313</b>	<b>1995</b>
13194-48-4	<b>Ethoprophos</b>		X	<b>1995</b>
110-80-5	<b>2-Ethoxyethanol</b>	C	<b>313</b>	<b>1990</b>
74051-80-2	<b>2-(1-(Ethoxyimino) butyl)-5-(2-(ethylthio)propyl)-3-hydroxyl-2-cyclohexen-1-one</b>		X	<b>1995</b>
25311-71-1	<b>2-((Ethoxyl((1-methylethyl)amino]phosphinothioyl]oxy)</b>		X	<b>1995</b>

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	<b>benzoic acid 1-methylethyl ester</b>			
141-78-6	<b>Ethyl acetate</b>	C		1991
140-88-5	<b>Ethyl acrylate</b>	C	313	1990
31218-83-4	<b>3-((Ethylamino)methoxyphosphinothioyl)oxy)-2-butenic acid, 1-methylethyl ester</b>		X	1995
100-41-4	<b>Ethylbenzene</b>	C	313	1990
51-79-6	<b>Ethyl carbamate</b>	C	X	1990
75-00-3	<b>Ethyl chloride</b>	C	X	1990
541-41-3	<b>Ethyl chloroformate</b>		313	1990
90982-32-4	<b>Ethyl-2-(((4-chloro-6-methoxyprimidin-2-yl)-carbonyl)-amino)sulfonyl)benzoate</b>		X	1995
107-12-0	<b>Ethyl cyanide</b>	C		1991
759-94-4	<b>Ethyl dipropylthiocarbamate</b>		313	1995
74-85-1	<b>Ethylene</b>		313	1990
111-54-6	<b>Ethylenebisdithiocarbamic acid, salts &amp; esters</b>	C	X*	1991
111-54-6	<b>Ethylenebisdithiocarbamic acid, salts and esters</b>		N17 1	
107-15-3	<b>Ethylenediamine</b>	C		1991
60-00-4	<b>Ethylenediamine-tetraacetic acid (EDTA)</b>	C		1991
106-93-4	<b>Ethylene dibromide</b>	C	X	1990
107-06-2	<b>Ethylene dichloride</b>	C	X	1990
107-21-1	<b>Ethylene glycol</b>	C	313	1990
75-21-8	<b>Ethylene oxide</b>	C	313	1990
96-45-7	<b>Ethylene thiourea</b>	C	313	1990
60-29-7	<b>Ethyl ether</b>	C		1991
97-63-2	<b>Ethyl methacrylate</b>	C		1991
62-50-0	<b>Ethyl methanesulfonate</b>	C		1991
151-56-4	<b>Ethyleneimine</b>	C	313	1990
75-34-3	<b>Ethylidene Dichloride</b>	C	313	1991

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52-85-7	<b>Famphur</b>	C	313	1991
60168-88-9	<b>Fenarimol</b>		313	1995
13356-08-6	<b>Fenbutatin oxide</b>		313	1995
66441-23-4	<b>Fenoxaprop ethyl</b>		313	1995
72490-01-8	<b>Fenoxycarb</b>		313	1995
39515-41-8	<b>Fenpropathrin</b>		313	1995
55-38-9	<b>Fenthion</b>		313	1995
51630-58-1	<b>Fenvalerate</b>		313	1995
14484-64-1	<b>Ferbam</b>		313	1995
1185-57-5	<b>Ferric ammonium citrate</b>	C		1992
2944-67-4	<b>Ferric ammonium oxalate</b>	C		1992
55488-87-4	<b>Ferric ammonium oxalate</b>	C		1993
7705-08-0	<b>Ferric chloride</b>	C		1993
7783-50-8	<b>Ferric fluoride</b>	C		1993
10421-48-4	<b>Ferric nitrate</b>	C	*	1993
10028-22-5	<b>Ferric sulfate</b>	C		1993
10045-89-3	<b>Ferrous ammonium sulfate</b>	C		1993
7758-94-3	<b>Ferrous chloride</b>	C		1993
7720-78-7	<b>Ferrous sulfate</b>	C	*	1993
7782-63-0	<b>Ferrous sulfate</b>	C		1993
	<b>Fine mineral fibers</b>	C		
	<b>Fine mineral fibers (c)</b>	C		
69806-50-4	<b>Fluazifop butyl</b>		313	1995
2164-17-2	<b>Fluometuron</b>		313	1990
206-44-0	<b>Fluoranthene</b>	C	*	1992
86-73-7	<b>Fluorene</b>	C		1991
7782-41-4	<b>Fluorine</b>	C	313	1993
640-19-7	<b>Fluoroacetamide</b>	C		1992
62-74-8	<b>Fluoroacetic acid, sodium salt</b>	C	X	1991

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The Massachusetts Toxics Use Reduction Act, Reportable Chemical List for Calendar Year 2003

Sorted Alphabetically by Name

CAS	NAME	C	313	ADD
51-21-8	Fluorouracil		313	1995
51-21-8	5-Fluorouracil		X	
69409-94-5	Fluvalinate		313	1995
133-07-3	Folpet		313	1995
72178-02-0	Fomesafen		313	1995
50-00-0	Formaldehyde	C	313	1990
50-00-0	Formaldehyde (solution)	C	X	1990
64-18-6	Formic acid	C	313	1991
76-13-1	Freon 113		313	1990
110-17-8	Fumaric acid	C		1991
110-00-9	Furan	C		1991
109-99-9	Furan, tetrahydro-	C		1991
98-01-1	Furfural	C		1991
765-34-4	Glycidylaldehyde	C		1992
1022	Glycol Ethers	C	N23 0	
1022	Glycol Ethers (d)	C		
70-25-7	Guanidine, N-methyl-N'-nitro-N-nitroso-	C		1991
86-50-0	Guthion	C		1991
1023	Haloethers	C		
1024	Halomethanes	C		
353-59-3	Halon 1211		X	1992
75-63-8	Halon 1301		X	1991
124-73-2	Halon 2402		X	1991
2212-67-1	1H-Azepine-1 carbothioic acid, hexahydro-S-ethyl ester		X	1995
354-14-3	HCFC-121		X	1995
354-11-0	HCFC-121a		X	1995
306-83-2	HCFC-123		X	
354-23-4	HCFC-123a		X	

CAS	NAME	C	313	ADD
812-04-4	HCFC-123b		X	
2837-89-0	HCFC-124		X	
354-25-6	HCFC-124a		X	
1649-08-7	HCFC-132b		X	
75-88-7	HCFC-133a		X	1995
	HCFC-141b		X	
75-68-3	HCFC-142b		X	
75-43-4	HCFC-21		X	
75-45-6	HCFC-22		X	
128903-21-9	HCFC-225aa		X	1995
422-48-0	HCFC-225ba		X	1995
422-44-6	HCFC-225bb		X	1995
422-56-0	HCFC-225ca		X	1995
507-55-1	HCFC-225cb		X	1995
13474-88-9	HCFC-225cc		X	
431-86-7	HCFC-225da		X	1995
136013-79-1	HCFC-225ea		X	1995
111512-56-2	HCFC-225eb		X	1995
460-35-5	HCFC-253fb		X	1995
194-59-2	7H-Dibenzo(c,g)carbazole		313*	1995
76-44-8	Heptachlor	C	313	1990
1025	Heptachlor and Metabolites	C		
1024-57-3	Heptachlor epoxide	C		1992
76-44-8	1,4,5,6,7,8,8-Heptachloro-3a,4,7,7a-tetrahydro-4,7-methano-1H-indene	C	X	1990
87-68-3	Hexachloro-1,3-butadiene	C	313	1990
118-74-1	Hexachlorobenzene	C	313	1990
87-68-3	Hexachlorobutadiene	C	X	1990
	Hexachlorocyclohexane (all isomers) CAS 608-73-1	C		

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CAS	NAME	C	313	ADD
58-89-9	Hexachlorocyclohexane (gamma isomer)	C	X	1990
77-47-4	Hexachlorocyclopentadiene	C	313	1990
67-72-1	Hexachloroethane	C	313	1990
1335-87-1	Hexachloronaphthalene		313	1990
70-30-4	Hexachlorophene	C	313	1991
1888-71-7	Hexachloropropene	C		1992
757-58-4	Hexaethyl tetraphosphate	C		1992
13356-08-6	Hexakis(2-methyl-2-phenylpropyl)distannoxane		X	1995
822-06-0	Hexamethylene-1,6-diisocyanate	C	313*	1995
680-31-9	Hexamethylphosphoramide	C	313	1990
110-54-3	Hexane	C	X	1995
51235-04-2	Hexazinone		313	1995
53404-19-6	2,4-(1H,3H)-Pyrimidinedione, 5-bromo-6-methyl-3-(1-methylpropyl), lithium salt		X	1995
133-06-2	1H-Isoindole-1,3(2H)-dione, 3a,4,7,7a-tetrahydro-2-[(trichloromethyl)thio]-	C	X	1990
67485-29-4	Hydramethylnon		313	1995
302-01-2	Hydrazine	C	313	1990
10034-93-2	Hydrazine sulfate		313	1990
57-14-7	Hydrazine, 1,1-dimethyl-	C	X	1990
1615-80-1	Hydrazine, 1,2-diethyl-	C		1992
540-73-8	Hydrazine, 1,2-dimethyl-	C		1992
122-66-7	Hydrazine, 1,2-diphenyl-	C	X	1990
60-34-4	Hydrazine, methyl-	C	X	1990
122-66-7	Hydrazobenzene	C	X	1990
7647-01-0	Hydrochloric acid	C		1990
74-90-8	Hydrocyanic acid	C	X	1990
7664-39-3	Hydrofluoric acid	C	X	1990
7664-39-3	Hydrofluoric acid (conc. 50% or greater)	C	X	1990

CAS	NAME	C	313	ADD
7647-01-0	Hydrogen chloride (anhydrous)	C	X	1990
7647-01-0	Hydrogen chloride (gas only)	C	X	1990
74-90-8	Hydrogen cyanide	C	313	1990
7664-39-3	Hydrogen fluoride	C	313	1990
7664-39-3	Hydrogen fluoride (anhydrous)	C	X	1990
7783-06-4	Hydrogen sulfide	C	313	1993
80-15-9	Hydroperoxide, 1-methyl-1-phenylethyl-	C	X	1990
123-31-9	Hydroquinone (manufactured only)	C	313	1990
35554-44-0	Imazalil		313	1995
193-39-5	Indeno(1,2,3-cd)pyrene	C	313*	1991
13463-40-6	Iron carbonyl (Fe(CO)5), (TB-5-11)-		X	
13463-40-6	Iron, pentacarbonyl-		313	1995
123-92-2	iso-Amyl acetate	C		1991
110-19-0	iso-Butyl acetate	C		1991
78-83-1	Isobutyl alcohol	C		1991
78-81-9	iso-Butylamine	C		1991
78-84-2	Isobutyraldehyde		313	1990
79-31-2	iso-Butyric acid	C		1991
465-73-6	Isodrin	C	313	1992
25311-71-1	Isufenphos		313	1995
55-91-4	Isofluorophate	C		1991
78-59-1	Isophorone	C		1991
4098-71-9	Isophorone diisocyanate		313*	1995
78-79-5	Isoprene	C		1991
42504-46-1	Isopropanolamine dodecylbenzene sulfonate	C		1993
67-63-0	Isopropyl alcohol (mfg-strong acid process)		313	1990
80-05-7	4,4'-Isopropylidenediphenol		313	1990
120-58-1	Isosafrole	C	313	1990

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Sorted Alphabetically by Name

CAS	NAME	C	313	ADD
556-61-6	Isothiocyantomethane		X	1995
143-50-0	Kepon	C		1991
77501-63-4	Lactofen		313	1995
303-34-4	Lasiocarpine	C		1992
7439-92-1	Lead	C	313	1990
301-04-2	Lead acetate	C	*	1992
7645-25-2	Lead arsenate	C	*	1993
7784-40-9	Lead arsenate	C	*	1993
10102-48-4	Lead arsenate	C	*	1993
7758-95-4	Lead chloride	C	*	1993
1026	Lead Compounds	C	N420	
13814-96-5	Lead fluoborate	C	*	1993
7783-46-2	Lead fluoride	C	*	1993
10101-63-0	Lead iodide	C	*	1993
10099-74-8	Lead nitrate	C	*	1993
7446-27-7	Lead phosphate	C		1992
1072-35-1	Lead stearate	C	*	1992
7428-48-0	Lead stearate	C	*	1992
52652-59-2	Lead stearate	C	*	1993
56189-09-4	Lead stearate	C	*	1993
1335-32-6	Lead subacetate	C	*	1992
7446-14-2	Lead sulfate	C	*	1992
15739-80-7	Lead sulfate	C	*	1993
1314-87-0	Lead sulfide	C	*	1992
592-87-0	Lead thiocyanate	C	*	1992
58-89-9	Lindane	C	313	1990
330-55-2	Linuron		313	1995
554-13-2	Lithium carbonate		313	1995

CAS	NAME	C	313	ADD
14307-35-8	Lithium chromate	C	*	1993
55406-53-6	3-Iodo-2-propynyl butylcarbamate		313	1995
121-75-5	Malathion	C	313	1991
110-16-7	Maleic acid	C		1991
108-31-6	Maleic anhydride	C	313	1990
123-33-1	Maleic hydrazide	C		1991
109-77-3	Malononitrile	C	313	1991
12427-38-2	Maneb		313	1990
7439-96-5	Manganese		313	1990
1027	Manganese Compounds	C	N450	
15339-36-3	Manganese, bis(dimethylcarbamodithioato-S,S)-(manganesedimethyldithiocarbamate)	C	*	
101-14-4	MBOCA	C	X	1990
149-30-4	MBT		X	1995
94-74-6	MCPA		X	1995
108-39-4	m-Cresol	C	313	1990
99-65-0	m-Dinitrobenzene	C	313	1990
101-68-8	MDI	C	X*	1990
51-75-2	Mechlorethamine		X	1990
93-65-2	Mecoprop		313	1995
148-82-3	Melphalan	C		1991
149-30-4	2-Mercaptobenzothiazole		313	1995
2032-65-7	Mercaptodimethur	C	X	1992
592-04-1	Mercuric cyanide	C	*	1992
10045-94-0	Mercuric nitrate	C	*	1993
7783-35-9	Mercuric sulfate	C	*	1993
592-85-8	Mercuric thiocyanate	C	*	1992
7782-86-7	Mercurous nitrate	C	*	1993
10415-75-5	Mercurous nitrate	C	*	1993

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7439-97-6	<b>Mercury</b>	C	313	1990
1028	<b>Mercury Compounds</b>	C	N45 8	
628-86-4	<b>Mercury fulminate</b>	C	*	1992
150-50-5	<b>Merphos</b>		313	1995
126-98-7	<b>methacrylonitrile</b>	C	313	1991
137-42-8	<b>Metham sodium</b>		313	1995
74-89-5	<b>Methanamine</b>	C		1991
75-50-3	<b>Methanamine, N,N-dimethyl-</b>	C		1991
124-40-3	<b>Methanamine, N-methyl-</b>	C	X	1991
62-75-9	<b>Methanamine, N-methyl-N-nitroso-</b>	C	X	1990
74-87-3	<b>Methane, chloro-</b>	C	X	1990
107-30-2	<b>Methane, chloromethoxy-</b>	C	X	1990
624-83-9	<b>Methane, isocyanato-</b>	C	X	
542-88-1	<b>Methane, oxybis[chloro-</b>	C	X	1990
509-14-8	<b>Methane, tetranitro-</b>	C		1992
67-66-3	<b>Methane, trichloro-</b>	C	X	1990
594-42-3	<b>Methanesulfenyl chloride, trichloro-</b>	C		1992
74-93-1	<b>Methanethiol</b>	C	X	1991
17702-57-7	<b>Methanimidamide, N,N-dimethyl-N-[2-methyl-4- [[[(methylamino)carbonyl]oxy]phenol]- (Formparanate)</b>	C		
23422-53-9	<b>Methanimidamide, N,N-dimethyl-N-[3- [[[(methylamino)carbonyl]oxylphenyl]- ,monohydrochloride (formetanate hydrochloride)</b>	C		
67-56-1	<b>Methanol</b>	C	313	1990
57-74-9	<b>4,7-Methanoindan, 1,2,3,4,5,6,7,8,8- octachloro-2,3,3a,4,7,7a-hexahydro-</b>	C	X	1990
91-80-5	<b>Methapyrilene</b>	C		1991

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20354-26-1	<b>Methazole</b>		313	1995
2032-65-7	<b>Methiocarb</b>	C	313	1992
16752-77-5	<b>Methomyl</b>	C		1993
94-74-6	<b>Methoxone</b>		313	1995
3653-48-3	<b>Methoxone sodium salt</b>		313	1995
72-43-5	<b>Methoxychlor</b>	C	313	1990
109-86-4	<b>2-Methoxyethanol</b>		313	1990
101200-48-0	<b>2-(4-Methoxy-6-methyl-1,3,5-triazin-2-yl)- methylamino)carbonyl)amino)sulfonyl)-, methyl ester</b>		X	1995
96-33-3	<b>Methyl acrylate</b>		313	1990
74-83-9	<b>Methyl bromide</b>	C	X	1990
56-49-5	<b>3-Methylcholanthrene</b>	C	*	1991
74-87-3	<b>Methyl chloride</b>	C	X	1990
79-22-1	<b>Methyl chlorocarbonate</b>	C	313	1991
71-55-6	<b>Methyl chloroform</b>	C	X	1990
79-22-1	<b>methyl chloroformate</b>	C	X	1991
3697-24-3	<b>5-Methylchrysene</b>		313*	1995
75790-84-0	<b>4-Methyldiphenylmethane-3,4-diisocyanate</b>		313*	1995
2439-01-2	<b>6-Methyl-1,3-dithiolo[4,5-b]quinoxalin-2-one</b>		X	1995
101-14-4	<b>4,4'-Methylenebis(2-chloroaniline)</b>	C	313	1990
97-23-4	<b>2,2'-Methylenebis(4-chlorophenol)</b>		X	1995
101-61-1	<b>4,4'-Methylenebis(N,N- dimethyl)benzenamine</b>		313	1990
101-77-9	<b>4,4'-Methylenedianiline</b>	C	313	1990
78-93-3	<b>Methyl ethyl ketone</b>	C	313	1990
78-93-3	<b>Methyl ethyl ketone (MEK)</b>	C	X	1990
1338-23-4	<b>Methyl ethyl ketone peroxide</b>	C		1992
60-34-4	<b>Methyl hydrazine</b>	C	313	1990
74-88-4	<b>Methyl iodide</b>	C	313	1990

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108-10-1	<b>Methyl isobutyl ketone</b>	C	313	1990
624-83-9	<b>Methyl isocyanate</b>	C	313	1990
556-61-6	<b>Methyl isothiocyanate</b>		313	1995
75-86-5	<b>2-Methylactonitrile</b>	C	313	1991
74-93-1	<b>Methyl mercaptan</b>	C	313	1991
80-62-6	<b>Methyl methacrylate</b>	C	313	1990
298-00-0	<b>Methyl parathion</b>	C	313	1992
109-06-8	<b>2-Methylpyridine</b>	C	313	1991
1634-04-4	<b>Methyl tert-butyl ether</b>	C	313	1990
5124-30-1	<b>1,1'-Methylene bis(4-isocyanatocyclohexane)</b>		313*	1995
74-95-3	<b>Methylene bromide</b>	C	313	1990
75-09-2	<b>Methylene chloride</b>	C	X	1990
56-04-2	<b>Methylthiouracil</b>	C		1991
9006-42-2	<b>Metiram</b>		313	1995
21087-64-9	<b>Metribuzin</b>		313	1995
7786-34-7	<b>Mevinphos</b>	C	313	1993
315-18-4	<b>Mexacarbate</b>	C		1992
90-94-8	<b>Michler's ketone</b>		313	1990
50-07-7	<b>Mitomycin C</b>	C		1991
554-84-7	<b>m-Nitrophenol</b>	C		1992
99-08-1	<b>m-Nitrotoluene</b>	C		1991
2212-67-1	<b>Molinate</b>		313	1995
1313-27-5	<b>Molybdenum trioxide</b>		313	1990
76-15-3	<b>Monochloropentafluoroethane</b>		313	1991
75-04-7	<b>Monoethylamine</b>	C		1991
74-89-5	<b>Monomethylamine</b>	C		1991
150-68-5	<b>Monuron</b>		313	1995
2763-96-4	<b>Muscimol</b>	C		1992

CAS	NAME	C	313	ADD
505-60-2	<b>Mustard gas</b>		313	1990
108-38-3	<b>m-Xylene</b>	C	313	1990
88671-89-0	<b>Myclobutanil</b>		313	1995
40487-42-1	<b>N-(1-Ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine</b>		X	1995
69409-94-5	<b>N-(2-Chloro-4-(trifluoromethyl)phenyl)-DL-valine(+)-cyano(3-phenoxyphenyl)methyl ester</b>		X	1995
709-98-8	<b>N-(3,4-Dichlorophenyl)propanamide</b>		X	1995
34014-18-1	<b>N-(5-(1,1-Dimethylethyl)-1,3,4-thiadiazol-2-yl)-N,N'-dimethylurea</b>		X	1995
26644-46-2	<b>N,N'-(1,4-Piperazinediylbis(2,2,2-trichloroethylidene)) bisformamide</b>		X	1995
7287-19-6	<b>N,N'-Bis(1-methylethyl)-6-methylthio-1,3,5-triazine-2,4-diamine</b>		X	1995
91-66-7	<b>N,N-Diethylaniline</b>	C		
91-66-7	<b>N,N-Diethylaniline</b>	C		
121-69-7	<b>N,N-Dimethylaniline</b>	C	313	1990
68-12-2	<b>N,N-Dimethylformamide</b>	C	313	1995
142-59-6	<b>Nabam</b>		313	1995
300-76-5	<b>Naled</b>	C	313	1992
91-20-3	<b>Naphthalene</b>	C	313	1990
3173-72-6	<b>1,5-Naphthalene diisocyanate</b>		313*	1995
1338-24-5	<b>Naphthenic acid</b>	C		1992
63-25-2	<b>1-Naphthalenol, methylcarbamate</b>	C	X	1990
130-15-4	<b>1,4-Naphthoquinone</b>	C		1991
71-36-3	<b>n-Butyl alcohol</b>	C	313	1990
84-74-2	<b>n-Butyl phthalate</b>	C	X	1990
1861-40-1	<b>N-Butyl-N-ethyl-2,6-dinitro-4-(trifluoromethyl) benzenamine</b>		X	1995
117-84-0	<b>n-Dioctylphthalate</b>	C		1990

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834-12-8	<b>N-Ethyl-N'-(1-methylethyl)-6-(methylthio)-1,3,5,-triazine-2,4-diamine</b>		X	1995
110-54-3	<b>n-Hexane</b>	C	313	1995
7440-02-0	<b>Nickel</b>	C	313	1990
15699-18-0	<b>Nickel ammonium sulfate</b>	C	*	1993
13463-39-3	<b>Nickel carbonyl</b>	C	*	1993
7718-54-9	<b>Nickel chloride</b>	C	*	1993
37211-05-5	<b>Nickel chloride</b>	C	*	1993
1029	<b>Nickel Compounds</b>	C	N49 5	
557-19-7	<b>Nickel cyanide</b>	C	*	1992
12054-48-7	<b>Nickel hydroxide</b>	C	*	1993
14216-75-2	<b>Nickel nitrate</b>	C	*	1993
7786-81-4	<b>Nickel sulfate</b>	C	*	1993
54-11-5	<b>Nicotine</b>	C	*	1991
1055	<b>Nicotine and salts</b>		N50 3	
1929-82-4	<b>Nitrapyrin</b>		313	1995
1090	<b>Nitrate compounds (water dissociable)</b>		N51 1	
7697-37-2	<b>Nitric acid</b>	C	313	1990
7697-37-2	<b>Nitric acid (conc 80% or greater)</b>	C	X	1990
10102-43-9	<b>Nitric oxide</b>	C		1993
139-13-9	<b>Nitriлотriacetic acid</b>		313	1990
98-95-3	<b>Nitrobenzene</b>	C	313	1990
92-93-3	<b>4-Nitrobiphenyl</b>	C	313	1990
1836-75-5	<b>Nitrofen</b>		313	1990
10102-44-0	<b>Nitrogen dioxide</b>	C		1993
10544-72-6	<b>Nitrogen dioxide</b>	C		1993
51-75-2	<b>Nitrogen mustard</b>		313	1990

CAS	NAME	C	313	ADD
10102-43-9	<b>Nitrogen oxide (NO)</b>	C		1993
55-63-0	<b>Nitroglycerin</b>	C	313	1990
25154-55-6	<b>Nitrophenol (mixed isomers)</b>	C		1993
1030	<b>Nitrophenols</b>	C		
88-75-5	<b>2-Nitrophenol</b>	C	313	1990
79-46-9	<b>2-Nitropropane</b>	C	313	1990
5522-43-0	<b>1-Nitropyrene</b>		313*	1995
1031	<b>Nitrosamines</b>	C		
62-75-9	<b>Nitrosodimethylamine</b>	C	X	1990
1321-12-6	<b>Nitrotoluene</b>	C		1992
872-50-4	<b>N-Methyl-2-pyrrolidone</b>		313	1995
924-42-5	<b>N-Methylolacrylamide</b>		313	1995
99-59-2	<b>5-Nitro-o-anisidine</b>		313	1990
99-55-8	<b>5-Nitro-o-toluidine</b>	C	313	1991
100-02-7	<b>4-Nitrophenol</b>	C	313	1990
1116-54-7	<b>N-Nitrosodiethanolamine</b>	C		1992
55-18-5	<b>N-Nitrosodiethylamine</b>	C	313	1990
62-75-9	<b>N-Nitrosodimethylamine</b>	C	313	1990
924-16-3	<b>N-Nitrosodi-n-butylamine</b>	C	313	1990
621-64-7	<b>N-Nitrosodi-n-propylamine</b>	C	313	1990
86-30-6	<b>N-Nitrosodiphenylamine</b>	C	313	1990
4549-40-0	<b>N-Nitrosomethylvinylamine</b>	C	313	1990
59-89-2	<b>N-Nitrosomorpholine</b>	C	313	1990
759-73-9	<b>N-Nitroso-N-ethylurea</b>	C	313	1990
684-93-5	<b>N-Nitroso-N-methylurea</b>	C	313	1990
615-53-2	<b>N-Nitroso-N-methylurethane</b>	C		1992
16543-55-8	<b>N-Nitrosonornicotine</b>		313	1990
100-75-4	<b>N-Nitrosopiperidine</b>	C	313	1990
930-55-2	<b>N-Nitrosopyrrolidine</b>	C		1992

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The Massachusetts Toxics Use Reduction Act, Reportable Chemical List for Calendar Year 2003

Sorted Alphabetically by Name

CAS	NAME	C	313	ADD
27314-13-2	Norflurazon		313	1995
107-10-8	n-Propylamine	C		1991
29232-93-7	O-(2-(Diethylamino)-6-methyl-4-pyrimidinyl)-O,O-dimethyl phosphorothioate		X	1995
41198-08-7	O-(4-Bromo-2-chlorophenyl)-O-ethyl-S-propylphosphorothioate		X	1995
297-97-2	O,O-Diethyl O-pyrazinyl phosphorothioate	C		1992
3288-58-2	O,O-Diethyl S-methyl dithiophosphate	C		1992
55-38-9	O,O-Dimethyl O-(3-methyl-4-(methylthio)phenyl) ester, phosphorothioic acid		X	1995
5598-13-0	O,O-Dimethyl-O-(3,5,6-trichloro-2-pyridyl)phosphorothioate		X	1995
90-04-0	o-Anisidine	C	313	1990
134-29-2	o-Anisidine hydrochloride		313	1990
95-48-7	o-Cresol	C	313	1990
2234-13-1	Octachloronaphthalene		313	1990
29082-74-4	Octachlorostyrene			
1689-99-2	Octanoic acid, 2,6-dibromo-4-cyanophenyl ester		X	1995
20325-40-0	o-Dianisidine dihydrochloride		X	1995
111984-09-9	o-Dianisidine hydrochloride		X	1995
95-50-1	o-Dichlorobenzene	C	X	1990
528-29-0	o-Dinitrobenzene	C	313	1990
35400-43-2	O-Ethyl O-(4-(methylthio)phenyl)phosphorodithioic acid S-propyl ester		X	1995
8014-95-7	Oleum (fuming sulfuric acid)	C		1993
88-72-2	o-Nitrotoluene	C		1991
19044-88-3	Oryzalin		313	1995
20816-12-0	Osmium oxide OsO4 (T-4)-	C	X	1990

CAS	NAME	C	313	ADD
20816-12-0	Osmium tetroxide	C	313	1990
119-93-7	o-Tolidine	C	X	1990
612-82-8	o-Tolidine dihydrochloride		X	1995
41766-75-0	o-Tolidine dihydrofluoride		X	1995
95-53-4	o-Toluidine	C	313	1990
636-21-5	o-Toluidine hydrochloride	C	313	1990
2164-07-0	7-Oxabicyclo(2.2.1)heptane-2,3-dicarboxylic acid, dipotassium salt		X	1995
75-21-8	Oxirane	C	X	1990
106-89-8	Oxirane, (chloromethyl)-	C	X	1990
75-56-9	Oxirane, methyl-	C	X	1990
301-12-2	Oxydemeton methyl		313	1995
19666-30-9	Oxydiazon		313	1995
42874-03-3	Oxyfluorfen		313	1995
95-47-6	o-Xylene	C	313	1990
10028-15-6	Ozone		313	1995
104-94-9	p-Anisidine		313	1990
30525-89-4	Paraformaldehyde	C		1993
123-63-7	Paraldehyde	C	313	1991
1910-42-5	Paraquat dichloride		313	1995
56-38-2	Parathion	C	313	1990
298-00-0	Parathion-methyl	C	X	1992
12002-03-8	Paris green	C		1993
106-51-4	p-Benzoquinone	C	X	1990
1336-36-3	PCBs	C	X	1990
106-47-8	p-Chloroaniline	C	313	1991
59-50-7	p-Chloro-m-cresol	C		1991
95-69-2	p-Chloro-o-toluidine		313	1995
104-12-1	p-Chlorophenyl isocyanate		313	1995

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The Massachusetts Toxics Use Reduction Act, Reportable Chemical List for Calendar Year 2003

Sorted Alphabetically by Name

CAS	NAME	C	313	ADD
82-68-8	<b>PCNB</b>	C	X	1990
120-71-8	<b>p-Cresidine</b>		313	1990
106-44-5	<b>p-Cresol</b>	C	313	1990
87-86-5	<b>PCP</b>	C	X	1990
100-25-4	<b>p-Dinitrobenzene</b>	C	313	1990
1114-71-2	<b>Pebulate</b>		313	1995
40487-42-1	<b>Pendimethalin</b>		313	1995
608-93-5	<b>Pentachlorobenzene</b>	C		1992
76-01-7	<b>Pentachloroethane</b>	C	313	1991
82-68-8	<b>Pentachloronitrobenzene</b>	C	X	1990
87-86-5	<b>Pentachlorophenol</b>	C	313	1990
504-60-9	<b>1,3-Pentadiene</b>	C		1992
1120-71-4	<b>1,3-Propane sultone</b>	C	X	1990
57-33-0	<b>Pentobarbital sodium</b>		313	1995
79-21-0	<b>Peracetic acid</b>		313	1990
127-18-4	<b>Perchloroethylene</b>	C	X	1990
594-42-3	<b>Perchloromethyl mercaptan</b>	C	313	1992
52645-53-1	<b>Permethrin</b>		313	1995
62-44-2	<b>Phenacetin</b>	C		1991
85-01-8	<b>Phenanthrene</b>	C	313	1991
108-95-2	<b>Phenol</b>	C	313	1990
114-26-1	<b>Phenol, 2-(1-methylethoxy)-, methylcarbamate</b>	C	X	1990
64-00-6	<b>Phenol, 3-(1-methylethyl)-, methyl carbamate (m-Cumenyl methylcarbamate)</b>	C		
2631-37-0	<b>Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate (promecarb)</b>	C		
26002-80-2	<b>Phenothrin</b>		313	1995
72490-01-8	<b>(2-(4-Phenoxy-phenoxy)-ethyl)carbamic acid ethyl ester</b>		X	1995

CAS	NAME	C	313	ADD
696-28-6	<b>Phenyl dichloroarsine</b>	C		1992
23564-06-9	<b>(1,2-Phenylenebis(iminocarbonothioyl)) biscarbamic acid diethyl ester</b>		X	1995
95-54-5	<b>1,2-Phenylenediamine</b>		313	1995
108-45-2	<b>1,3-Phenylenediamine</b>		313	1995
615-28-1	<b>1,2-Phenylenediamine dihydrochloride</b>		313	1995
624-18-0	<b>1,4-Phenylenediamine dihydrochloride</b>		313	1995
123-61-5	<b>1,3-Phenylene diisocyanate</b>		313*	1995
104-49-4	<b>1,4-Phenylene diisocyanate</b>		313*	1995
62-38-4	<b>Phenylmercuric acetate</b>	C		1991
62-38-4	<b>Phenylmercury acetate</b>	C		1991
10453-86-8	<b>5-(Phenylmethyl)-3-furanyl)methyl 2,2-dimethyl-3-(2-methyl-1-propenyl)cyclopropanecarboxylate</b>		X	1995
90-43-7	<b>2-Phenylphenol</b>		313	1990
103-85-5	<b>Phenylthiourea</b>	C		1991
57-41-0	<b>Phenytol</b>		313	1995
298-02-2	<b>Phorate</b>	C		1992
75-44-5	<b>Phosgene</b>	C	313	1990
7803-51-2	<b>Phosphine</b>	C	313	1993
52-68-6	<b>Phosphonic acid, (2,2,2-trichloro-1-hydroxyethyl)-, dimethyl ester</b>	C	X	1990
7664-38-2	<b>Phosphoric acid</b>	C	313	1990
961-11-5	<b>Phosphoric acid, 2-chloro-1-(2,3,5-trichlorophenyl) ethenyl dimethyl ester</b>		X	1990
62-73-7	<b>Phosphoric acid, 2-dichloroethenyl dimethyl ester</b>	C	X	1990
13194-48-4	<b>Phosphorodithioic acid O-ethyl S,S-dipropyl ester</b>		X	1995
56-38-2	<b>Phosphorothioic acid, O,O-diethyl-O-(4-nitrophenyl) ester</b>	C	X	1990

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CAS	NAME	C	313	ADD
7719-12-2	Phosphorous trichloride	C		1993
7723-14-0	Phosphorus	C		1993
7723-14-0	Phosphorus (yellow or white)	C	313	1990
10025-87-3	Phosphorus oxychloride	C		1993
7719-12-2	Phosphorus trichloride	C		1993
10025-87-3	Phosphoryl chloride	C		1993
1033	Phthalate Esters	C		
85-44-9	Phthalic anhydride	C	313	1990
1918-02-1	Picloram		313	1995
109-06-8	2-Picoline	C	X	1991
88-89-1	Picric acid		313	1990
120-54-7	Piperidine, 1,1-(tetrathiodicarbonothioyl)-bis-(Bis(pentamethylene)thiuram tetrasulfide)	C		
51-03-6	Piperonyl butoxide		313	1995
29232-93-7	Pirimiphos methyl		313	1995
100-01-6	p-Nitroaniline	C	313	1991
100-02-7	p-Nitrophenol	C	X	1990
156-10-5	p-Nitrosodiphenylamine		313	1990
99-99-0	p-Nitrotoluene	C		1991
1034	Polybrominated Biphenyls (PBBs)		N57 5	
1045	Polychlorinated alkanes (C10 to C13)		N58 3	
1336-36-3	Polychlorinated biphenyls	C	313	1990
1040	Polycyclic aromatic compounds (includes only 21 chemicals)		N59 0	
	Polycyclic organic matter	C		
	Polycyclic Organic Matter (e)	C		
9016-87-9	Polymeric diphenylmethane diisocyanate		313*	1995
1035	Polynuclear Aromatic Hydrocarbons	C		

CAS	NAME	C	313	ADD
7784-41-0	Potassium arsenate	C	*	1993
10124-50-2	Potassium arsenite	C	*	1993
7778-50-9	Potassium bichromate	C	*	1993
7758-01-2	Potassium bromate		313	1995
7789-00-6	Potassium chromate	C	*	1993
151-50-8	Potassium cyanide	C	*	1991
128-03-0	Potassium dimethyldithiocarbamate		313	1995
1310-58-3	Potassium hydroxide	C		1992
137-41-7	Potassium N-methyldithiocarbamate		313	1995
7722-64-7	Potassium permanganate	C	*	1993
506-61-6	Potassium silver cyanide	C	*	1992
106-50-3	p-Phenylenediamine	C	313	1990
41198-08-7	Profenofos		313	1995
7287-19-6	Prometryn		313	1995
23950-58-5	Pronamide	C	313	1993
1918-16-7	Propachlor		313	1995
1646-88-4	Propanal, 2-methyl-2-(methylsulfonyl)-,[(methylamino)carbonyl] oxime (Aldicarb sulfone)	C		
78-87-5	Propane 1,2-dichloro-	C	X	1990
1120-71-4	Propane sultone	C	313	1990
107-12-0	Propanenitrile	C		1991
709-98-8	Propanil		313	1995
2312-35-8	Propargite	C	313	1992
107-19-7	Propargyl alcohol	C	313	1991
107-02-8	2-Propenal	C	X	1990
107-11-9	2-Propen-1-amine		X	
115-07-1	Propene		X	1990
115-07-1	1-Propene		X	1990
107-13-1	2-Propenenitrile	C	X	1990

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CAS	NAME	C	313	ADD
126-98-7	<b>2-Propenenitrile, 2-methyl-</b>	C	X	1991
107-18-6	<b>2-Propen-1-ol</b>	C	X	1990
31218-83-4	<b>Propetamphos</b>		313	1995
60207-90-1	<b>Propiconazole</b>		313	1995
123-38-6	<b>Propionaldehyde</b>	C	313	1990
79-09-4	<b>Propionic acid</b>	C		1991
123-62-6	<b>Propionic anhydride</b>	C		1991
107-12-0	<b>Propionitrile</b>	C		1991
542-76-7	<b>Propionitrile, 3-chloro-</b>	C	X	1992
114-26-1	<b>Propoxur</b>	C	313	1990
115-07-1	<b>Propylene</b>		313	1990
75-56-9	<b>Propylene oxide</b>	C	313	1990
75-55-8	<b>Propyleneimine</b>	C	313	1990
106-49-0	<b>p-Toluidine</b>	C		1991
106-42-3	<b>p-Xylene</b>	C	313	1990
129-00-0	<b>Pyrene</b>	C		1991
121-21-1	<b>Pyrethrins</b>	C		1991
121-29-9	<b>Pyrethrins</b>	C		1991
8003-34-7	<b>Pyrethrins</b>	C		1993
110-86-1	<b>Pyridine</b>	C	313	1990
54-11-5	<b>Pyridine, 3-(1-methyl-2-pyrrolidiny)-,(S)-</b>	C		1991
504-24-5	<b>Pyridine, 4-amino-</b>	C		1992
57-47-6	<b>Pyrrolo[2,3-b] indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS-cis)- (Physostigmine)</b>	C		
91-22-5	<b>Quinoline</b>	C	313	1990
106-51-4	<b>Quinone</b>	C	313	1990
82-68-8	<b>Quintozene</b>	C	313	1990
76578-14-8	<b>Quizalofop-ethyl</b>		313	1995

CAS	NAME	C	313	ADD
50-55-5	<b>Reserpine</b>	C		1991
10453-86-8	<b>Resmethrin</b>		313	1995
108-46-3	<b>Resorcinol</b>	C		1991
301-12-2	<b>S-(2-(Ethylsulfinyl)ethyl) O,O-dimethyl ester phosphorothioic acid</b>		X	1995
78-48-8	<b>S,S,S-Tributyltrithiophosphate</b>		313	1995
81-07-2	<b>Saccharin (manufacturing)</b>	C	313	1991
81-07-2	<b>Saccharin and salts</b>	C		1990
94-59-7	<b>Safrole</b>	C	313	1990
626-38-0	<b>sec-Amyl acetate</b>	C		1992
105-46-4	<b>sec-Butyl acetate</b>	C		1991
78-92-2	<b>sec-Butyl alcohol</b>		313	1990
513-49-5	<b>sec-Butylamine</b>	C		1992
13952-84-6	<b>sec-Butylamine</b>	C		1993
7783-00-8	<b>Selenious acid</b>	C	*	1993
12039-52-0	<b>Selenious acid, dithallium(1+) salt</b>	C	*	1993
7782-49-2	<b>Selenium</b>	C	313	1990
1036	<b>Selenium Compounds</b>	C	N72 5	
7446-08-4	<b>Selenium dioxide</b>	C	*	1992
7488-56-4	<b>Selenium sulfide</b>	C	*	1992
630-10-4	<b>Selenourea</b>	C	*	1992
74051-80-2	<b>Sethoxydim</b>		313	1995
75-77-4	<b>Silane, chlorotrimethyl-</b>		X	1995
75-78-5	<b>Silane, dichlorodimethyl-</b>		X	1995
75-79-6	<b>Silane, trichloromethyl-</b>		X	1995
1095	<b>Silica, crystalline (respirable, &lt; 10 microns)</b>			2002
7440-22-4	<b>Silver – file to EPA ONLY</b>		313	1990
1037	<b>Silver Compounds</b>	C	N74 0	

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506-64-9	Silver cyanide	C	*	1992
7761-88-8	Silver nitrate	C	*	1993
93-72-1	Silvex (2,4,5-TP)	C		1991
122-34-9	Simazine		313	1995
7440-23-5	Sodium	C		1992
7631-89-2	Sodium arsenate	C	*	1993
7784-46-5	Sodium arsenite	C	*	1993
26628-22-8	Sodium azide (Na(N <sub>3</sub> ))	C	313	1993
10588-01-9	Sodium bichromate	C	*	1993
1333-83-1	Sodium bifluoride	C		1992
7631-90-5	Sodium bisulfite	C		1993
2146-10-8	Sodium chromate	C	*	1993
143-33-9	Sodium cyanide (Na(CN))	C	*	1991
1982-69-0	Sodium dicamba		313	1995
128-04-1	Sodium dimethyldithiocarbamate		313	1995
25155-30-0	Sodium dodecylbenzenesulfonate	C		1993
7681-49-4	Sodium fluoride	C		1993
62-74-8	Sodium fluoroacetate	C	313	1991
16721-80-5	Sodium hydrosulfide	C		1993
1310-73-2	Sodium hydroxide	C		1992
7681-52-9	Sodium hypochlorite	C		1993
10022-70-5	Sodium hypochlorite	C		1993
124-41-4	Sodium methylate	C		1991
137-42-8	Sodium methyldithiocarbamate		X	1995
7632-00-0	Sodium nitrite	C	313	1993
132-27-4	Sodium o-phenylphenoxide		313	1995
131-52-2	Sodium pentachlorophenate		313	1995
7558-79-4	Sodium phosphate, dibasic	C		1992
10039-32-4	Sodium phosphate, dibasic	C		1993

CAS	NAME	C	313	ADD
10140-65-5	Sodium phosphate, dibasic	C		1993
7601-54-9	Sodium phosphate, tribasic	C		1993
7758-29-4	Sodium phosphate, tribasic	C		1993
7785-84-4	Sodium phosphate, tribasic	C		1993
10101-89-0	Sodium phosphate, tribasic	C		1993
10124-56-8	Sodium phosphate, tribasic	C		1993
10361-89-4	Sodium phosphate, tribasic	C		1993
7782-82-3	Sodium selenite	C	*	1993
10102-18-8	Sodium selenite	C	*	1993
2151-06-8	Strontium chromate	C	*	1993
57-24-9	Strychnine	C	*	1991
1070	Strychnine and salts		N74 6	
100-42-5	Styrene	C	313	1990
96-09-3	Styrene oxide	C	313	1990
3689-24-5	Sulfotep	C		1992
12771-08-3	Sulfur monochloride	C		1993
1314-80-3	Sulfur phosphide	C		1992
7664-93-9	Sulfuric acid (aerosol)	C	313	1995
8014-95-7	Sulfuric acid (fuming)	C		1993
8014-95-7	Sulfuric acid, mixture with sulfur trioxide	C		1993
2699-79-8	Sulfuryl fluoride		313	1995
35400-43-2	Sulprofos		313	1995
93-76-5	2,4,5-T acid	C		1991
1319-72-8	2,4,5-T amines	C		1992
2008-46-0	2,4,5-T amines	C		1992
3813-14-7	2,4,5-T amines	C		1992
6369-96-6	2,4,5-T amines	C		1992
6369-97-7	2,4,5-T amines	C		1992

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34014-18-1	Tebuthiuron		313	1995
3383-96-8	Temephos		313	1995
107-49-3	Tepp	C		1991
5902-51-2	Terbacil		313	1995
625-16-1	tert-Amyl acetate	C		1992
540-88-5	tert-Butyl acetate	C		1992
75-65-0	tert-Butyl alcohol		313	1990
75-64-9	tert-Butylamine	C		1991
93-79-8	2,4,5-T esters	C		1991
1928-47-8	2,4,5-T esters	C		1992
2545-59-7	2,4,5-T esters	C		1992
25168-15-4	2,4,5-T esters	C		1993
61792-07-2	2,4,5-T esters	C		1993
79-94-7	Tetrabromobisphenol A		313	
95-94-3	1,2,4,5-Tetrachlorobenzene	C		1991
1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	C		1992
630-20-6	1,1,1,2-Tetrachloroethane	C	313	1992
79-34-5	1,1,2,2-Tetrachloroethane	C	313	1990
127-18-4	Tetrachloroethylene	C	313	1990
354-14-3	1,1,2,2-Tetrachloro-1-fluoroethane		313	1995
354-11-0	1,1,1,2-Tetrachloro-2-fluoroethane		313	1995
58-90-2	2,3,4,6-Tetrachlorophenol	C	*	1991
961-11-5	Tetrachlorvinphos		313	1990
64-75-5	Tetracycline hydrochloride		313	1995
78-00-2	Tetraethyl lead	C		1991
107-49-3	Tetraethyl pyrophosphate	C		1991
3689-24-5	Tetraethyldithiopyrophosphate	C		1992
533-74-4	Tetrahydro-3,5-dimethyl-2H-1,3,5-thiadiazine-2-thione		X	1995

CAS	NAME	C	313	ADD
53404-60-7	Tetrahydro-3,5-dimethyl-2H-1,3,5-thiadiazine-2-thione, ion(1-), sodium		X	1995
67485-29-4	Tetrahydro-5,5-dimethyl-2(1H)-pyrimidinone(3-(4-(trifluoromethyl)phenyl)-1-(2-(4-(trifluoromethyl)phenyl)ethenyl)-2-propenylidene)hydrazone	X	1995	
7696-12-0	Tetramethrin		313	1995
39515-41-8	2,2,3,3-Tetramethylcyclopropane carboxylic acid cyano(3-phenoxyphenyl)methyl ester		X	1995
509-14-8	Tetranitromethane	C		1992
1314-32-5	Thallic oxide	C	*	1992
7440-28-0	Thallium	C	313	1990
7791-12-0	Thallium chloride TlCl	C	*	1993
1038	Thallium Compounds	C	N760	
10031-59-1	Thallium sulfate	C	*	1993
563-68-8	Thallium(I) acetate	C	*	1992
6533-73-9	Thallium(I) carbonate	C	*	1992
10102-45-1	Thallium(I) nitrate	C	*	1993
7446-18-6	Thallium(I) sulfate	C	*	1992
6533-73-9	Thallos carbonate	C	*	1992
7791-12-0	Thallos chloride	C	*	1993
7446-18-6	Thallos sulfate	C	*	1992
148-79-8	Thiabendazole		313	1995
148-79-8	2-(4-Thiazolyl)-1H-benzimidazole		X	1995
62-55-5	Thioacetamide	C	313	1990
28249-77-6	Thiobencarb		313	1995
139-65-1	4,4'-Thiodianiline		313	1990
59669-26-0	Thiodicarb		313	1995
39196-18-4	Thiofanox	C		1993

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The Massachusetts Toxics Use Reduction Act, Reportable Chemical List for Calendar Year 2003

Sorted Alphabetically by Name

CAS	NAME	C	313	ADD
74-93-1	Thiomethanol	C	X	1991
297-97-2	Thionazin	C		1992
1634-02-2	Thioperoxydicarbonic diamid, tetrabutyl (tetrabutylthiuram disulfide)	C		
97-77-8	Thioperoxydicarbonic diamide,tetraethyl (Disulfiram)	C		
23564-06-9	Thiophanate ethyl			313
23564-05-8	Thiophanate-methyl		313	1995
108-98-5	Thiophenol	C		1991
79-19-6	Thiosemicarbazide	C	313	1991
62-56-6	Thiourea	C	313	1990
5344-82-1	Thiourea, (2-chlorophenyl)-	C	*	1992
86-88-4	Thiourea, 1-naphthalenyl-	C		1991
137-26-8	Thiram	C	313	1991
1314-20-1	Thorium dioxide		313	1990
7550-45-0	Titanium chloride (TiCl4) (T-4)-	C	X	1990
7550-45-0	Titanium tetrachloride	C	313	1990
108-88-3	Toluene	C	313	1990
26471-62-5	Toluene diisocyanate (unspecified isomer)	C	X	
584-84-9	Toluene-2,4-diisocyanate	C	313	1990
91-08-7	Toluene-2,6-diisocyanate	C	313	1990
25376-45-8	Toluenediamine	C	X	1990
26471-62-5	Toluenediisocyanate (mixed isomers)	C	313	1990
8001-35-2	Toxaphene	C	313	1990
32534-95-5	2,4,5-TP esters	C		1993
10061-02-6	trans-1,3-Dichloropropene		313	1995
110-57-6	trans-1,4-Dichloro-2-butene		313	1995
110-57-6	trans-1,4-Dichlorobutene		X	1995
43121-43-3	Triadimefon		313	1995
2303-17-5	Triallate		313	1995

CAS	NAME	C	313	ADD
68-76-8	Triaziquone		313	1990
101200-48-0	Tribenuron methyl		313	1995
75-25-2	Tribromomethane	C	X	1990
1983-10-4	Tributyltin fluoride		313	1995
2155-70-6	Tributyltin methacrylate		313	1995
52-68-6	Trichlorfon	C	313	1990
76-02-8	Trichloroacetyl chloride		313	1995
120-82-1	1,2,4-Trichlorobenzene	C	313	1990
71-55-6	1,1,1-Trichloroethane	C	313	1990
79-00-5	1,1,2-Trichloroethane	C	313	1990
79-01-6	Trichloroethylene	C	313	1990
75-69-4	Trichlorofluoromethane	C	313	1991
594-42-3	Trichloromethanesulfenyl chloride	C	X	1992
75-69-4	Trichloromonofluoromethane	C	X	1991
25167-82-2	Trichlorophenol	C	*	
933-75-5	2,3,6-Trichlorophenol	C	*	1992
95-95-4	2,4,5-Trichlorophenol	C	313	1990
88-06-2	2,4,6-Trichlorophenol	C	313	1990
609-19-8	3,4,5-Trichlorophenol	C	*	1992
15950-66-0	2,3,4-Trichlorophenol	C	*	1993
933-78-8	2,3,5-Trichlorophenol	C	*	1992
96-18-4	1,2,3-Trichloropropane		313	1995
57213-69-1	Triclopyr triethylammonium salt		313	1995
27323-41-7	Triethanolamine dodecylbenzene sulfonate	C		1993
121-44-8	Triethylamine	C	313	1991
69806-50-4	2-(4-(5-(Trifluoromethyl)-2-pyridinyl[oxy]-phenoxy)propanoic acid, butyl ester		X	1995
1582-09-8	Trifluralin	C	313	1990
26644-46-2	Triforine		313	1995

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The Massachusetts Toxics Use Reduction Act, Reportable Chemical List for Calendar Year 2003

Sorted Alphabetically by Name

CAS	NAME	C	313	ADD
75-50-3	Trimethylamine	C		1991
95-63-6	1,2,4-Trimethylbenzene		313	1990
16938-22-0	2,2,4-Trimethylhexamethylene diisocyanate		313*	1995
15646-96-5	2,4,4-Trimethylhexamethylene diisocyanate		313*	1995
540-84-1	2,2,4-Trimethylpentane	C		
540-84-1	2,2,4-Trimethylpentane	C		
2655-15-4	2,3,5-Trimethylphenyl methylcarbamate		313	1995
99-35-4	1,3,5-Trinitrobenzene	C		1991
639-58-7	Triphenyltin chloride		313	1995
76-87-9	Triphenyltin hydroxide		313	1995
126-72-7	Tris(2,3-dibromopropyl) phosphate	C	313	1990
14484-64-1	Tris(dimethylcarbamodithioato-S,S')iron		X	1995
72-57-1	Trypan blue	C	313	1991
13560-99-1	2,4,5-T salts	C		1993
66-75-1	Uracil mustard	C		1991
541-09-3	Uranyl acetate	C		1992
10102-06-4	Uranyl nitrate	C	*	1993
36478-76-9	Uranyl nitrate	C	*	1993
2164-17-2	Urea, N,N-dimethyl-N'-[3-(trifluoromethyl)phenyl]-		X	
51-79-6	Urethane	C	313	1990
7440-62-2	Vanadium (except when in alloy)		313	1990
1314-62-1	Vanadium pentoxide	C		1992
1065	Vanadium Compounds		N770	
27774-13-6	Vanadyl sulfate	C		1993
2699-79-8	Vikane		X	1995
50471-44-8	Vinclozolin		313	1995
108-05-4	Vinyl acetate	C	313	1990
108-05-4	Vinyl acetate monomer	C	X	1990

CAS	NAME	C	313	ADD
593-60-2	Vinyl bromide	C	313	1990
75-01-4	Vinyl chloride	C	313	1990
75-35-4	Vinylidene chloride	C	313	1990
81-81-2	Warfarin	C	X*	1991
1075	Warfarin and salts		N874	
81-81-2	Warfarin, & salts, conc.>0.3%	C	X*	1991
1330-20-7	Xylene (mixed isomers)	C	313	1990
1300-71-6	Xylenol	C		1992
87-62-7	2,6-Xylidine		313	1990
7440-66-6	Zinc (fume or dust)	C	313	1990
557-34-6	Zinc acetate	C	*	1992
14639-97-5	Zinc ammonium chloride	C	*	1993
14639-98-6	Zinc ammonium chloride	C	*	1993
52628-25-8	Zinc ammonium chloride	C	*	1993
1332-07-6	Zinc borate	C	*	1992
7699-45-8	Zinc bromide	C	*	1993
3486-35-9	Zinc carbonate	C	*	1992
7646-85-7	Zinc chloride	C	*	1993
1039	Zinc Compounds	C	N982	
557-21-1	Zinc cyanide	C	*	1992
7783-49-5	Zinc fluoride	C	*	1993
557-41-5	Zinc formate	C	*	1992
7779-86-4	Zinc hydrosulfite	C	*	1993
7779-88-6	Zinc nitrate	C	*	1993
127-82-2	Zinc phenolsulfonate	C	*	1991
1314-84-7	Zinc phosphide	C		1992
1314-84-7	Zinc phosphide (conc. <= 10%)	C		1992
1314-84-7	Zinc phosphide (conc. > 10%)	C		1992

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The Massachusetts Toxics Use Reduction Act, Reportable Chemical List for Calendar Year 2003

Sorted Alphabetically by Name

CAS	NAME	C	313	ADD
16871-71-9	<b>Zinc silicofluoride</b>	<b>C</b>	<b>*</b>	<b>1993</b>
7733-02-0	<b>Zinc sulfate</b>	<b>C</b>		<b>1993</b>
14324-55-1	<b>Zinc, bis(diethylcarbomodithioato-S,S)-(ethyl ziram)</b>	<b>C</b>	<b>*</b>	
137-30-4	<b>Zinc, bis(dimethylcarbomodithioato-S,S)-, (ziram)</b>	<b>C</b>	<b>*</b>	

CAS	NAME	C	313	ADD
12122-67-7	<b>Zineb</b>		<b>313</b>	<b>1990</b>
13746-89-9	<b>Zirconium nitrate</b>	<b>C</b>	<b>*</b>	<b>1993</b>
16923-95-8	<b>Zirconium potassium fluoride</b>	<b>C</b>		<b>1993</b>
14644-61-2	<b>Zirconium sulfate</b>	<b>C</b>		<b>1993</b>
10026-11-6	<b>Zirconium tetrachloride</b>	<b>C</b>		<b>1993</b>

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The Massachusetts Toxics Use Reduction Act, Reportable Chemical List for Calendar Year 2001  
Sorted Numerically by CAS

CAS	NAME	C	313	ADD	CAS	NAME	C	313	ADD
1000	Antimony Compounds	C	N010		1031	Nitrosamines	C		
1001	Arsenic Compounds	C	N020		1033	Phthalate Esters	C		
1002	Barium Compounds		N040		1034	Polybrominated Biphenyls (PBBs)		N575	
1003	Beryllium Compounds	C	N050		1035	Polynuclear Aromatic Hydrocarbons	C		
1004	Cadmium Compounds	C	N078		1036	Selenium Compounds	C	N725	
1005	Chlordane (Technical Mixture and Metabolites)	C			1037	Silver Compounds	C	N740	
1006	Chlorinated Benzenes	C			1038	Thallium Compounds	C	N760	
1007	Chlorinated Ethanes	C			1039	Zinc Compounds	C	N982	
1008	Chlorinated Naphthalene	C			1040	Polycyclic aromatic compounds (includes only 21 chemicals)		N590	
1011	Chloroalkyl Ethers	C				Polycyclic organic matter	C		
1009	Chlorophenols	C	N084			Polycyclic Organic Matter (e)	C		
1012	Chromium Compounds	C	N090		1045	Polychlorinated alkanes (C10 to C13)		N583	
1013	Cobalt Compounds	C	N096		1050	Diisocyanates (includes only 20 chemicals)		N120	
1014	Coke Oven Emissions	C			1055	Nicotine and salts	C	N503	1991
1015	Copper Compounds	C	N100		1060	Dioxin and Dioxin like Compounds		N150	
1016	Cyanide Compounds	C	N106		1065	Vanadium Compounds		N770	
1017	DDT and Metabolites	C			1070	Strychnine, and salts	C	N746	1991
1018	Dichlorobenzidine	C			1075	Warfarin and salts		N874	
1019	Diphenylhydrazine	C			1090	Nitrate compounds (water dissociable)		N511	
1020	Endosulfan and Metabolites	C			1095	<b>Silica, crystalline (respirable, &lt; 10 microns)</b>			2002
1021	Endrin and Metabolites	C			6-60-7	Picloram		313	1995
	Fine mineral fibers	C			30-59-3	Tributyltin fluoride		313	1995
	Fine mineral fibers (c)	C			50-00-0	Formaldehyde	C	313	1990
1022	Glycol Ethers	C	N230		50-00-0	Formaldehyde (solution)	C	X	
1023	Haloethers	C			50-07-7	Mitomycin C	C		1991
1024	Halomethanes	C			50-18-0	Cyclophosphamide	C		1991
	HCFC-141b	X			50-29-3	DDT	C		
1025	Heptachlor and Metabolites	C			50-32-8	Benzo[a]pyrene	C	313*	1991
1026	Lead Compounds	C	N420		50-55-5	Reserpine	C		1991
1027	Manganese Compounds	C	N450		51-03-6	Piperonyl butoxide		313	1995
1028	Mercury Compounds	C	N458		51-21-8	5-Fluorouracil		X	
1029	Nickel Compounds	C	N495		51-21-8	Fluorouracil		313	1995
1030	Nitrophenols	C							

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The Massachusetts Toxics Use Reduction Act, Reportable Chemical List for Calendar Year 2003

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CAS	NAME	C	313	ADD
51-28-5	2,4-Dinitrophenol	C	313	1990
51-43-4	Epinephrine	C		1991
51-75-2	2-Chloro-N-(2-chloroethyl)-N-methylethanamine		X	1990
51-75-2	Mechlorethamine		X	1990
51-75-2	Nitrogen mustard		313	1990
51-79-6	Carbamic acid, ethyl ester	C	X	1990
51-79-6	Ethyl carbamate	C	X	1990
51-79-6	Urethane	C	313	
52-51-7	Bronopol		X	
52-68-6	Phosphonic acid, (2,2,2-trichloro-1-hydroxyethyl)-,dimethyl ester	C	X	
52-68-6	Trichlorfon	C	313	1990
52-85-7	Famphur	C	313	1991
53-70-3	Dibenz[a,h]anthracene	C	313*	1991
53-96-3	2-Acetylaminofluorene	C	313	1990
54-11-5	Nicotine	C	*	1991
54-11-5	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-,(S)-	C		1991
55-18-5	N-Nitrosodiethylamine	C	313	1990
55-21-0	Benzamide		313	1990
55-38-9	Fenthion		313	1995
55-38-9	O,O-Dimethyl O-(3-methyl-4-(methylthio)phenyl) ester, phosphorothioic acid		X	1995
55-63-0	Nitroglycerin	C	313	1990
55-91-4	Diisopropylfluorophosphate	C		1991
55-91-4	Isofluorophate	C		
56-04-2	Methylthiouracil	C		1991
56-23-5	Carbon tetrachloride	C	313	
56-35-9	Bis(tributyltin) oxide		313	1995
56-38-2	Parathion	C	313	1990
56-38-2	Phosphorothioic acid, O,O-diethyl-O-(4-nitrophenyl) ester	C	X	1990
56-49-5	3-Methylcholanthrene	C	*	1991

CAS	NAME	C	313	ADD
56-53-1	Diethylstilbestrol	C		1991
56-55-3	Benz[a]anthracene	C	313*	
56-72-4	Coumaphos	C		1991
57-12-5	Cyanides (soluble salts and complexes)	C	*	1991
57-14-7	1,1-Dimethyl hydrazine	C	313	1990
57-14-7	Dimethylhydrazine	C	X	1990
57-14-7	Hydrazine, 1,1-dimethyl-	C	X	1990
57-24-9	Strychnine	C	*	1991
57-33-0	Pentobarbital sodium		313	1995
57-41-0	Phenytoin		313	1995
57-47-6	Pyrrolo[2,3-b] indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS-cis)-(Physostigmine)	C		
57-57-8	beta-Propiolactone	C	313	1990
57-64-7	Benzoic Acid (Physostigminesalicylate)	C		
57-74-9	4,7-Methanoindan, 1,2,3,4,5,6,7,8-octachloro-2,3,3a,4,7,7a-hexahydro-	C	X	
57-74-9	Chlordane	C	313	1990
57-97-6	7,12-Dimethylbenz[a]anthracene	C	313*	1991
58-89-9	Cyclohexane, 1,2,3,4,5,6-hexachloro-(1.alpha.,2.alpha.,3.beta.,4.alpha.,5.alpha.,6.beta.)-	C	X	1990
58-89-9	Hexachlorocyclohexane (gamma isomer)	C	X	1990
58-89-9	Lindane	C	313	1990
58-90-2	2,3,4,6-Tetrachlorophenol	C	*	1991
59-50-7	p-Chloro-m-cresol	C		1991
59-89-2	N-Nitrosomorpholine	C	313	1990
60-00-4	Ethylenediamine-tetraacetic acid (EDTA)	C		1991
60-09-3	4-Aminoazobenzene		313	1990
60-11-7	4-Dimethylaminoazobenzene	C	313	1990
60-11-7	Dimethylaminoazobenzene	C	X	1990
60-29-7	Ethane, 1,1'-oxybis-	C		1991

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Sorted Numerically by CAS

CAS	NAME	C	313	ADD
60-29-7	Ethyl ether	C		1991
60-34-4	Hydrazine, methyl-	C	X	
60-34-4	Methyl hydrazine	C	313	1990
60-35-5	Acetamide	C	313	1990
60-51-5	Dimethoate	C	313	1991
60-57-1	Dieldrin	C		1991
61-82-5	Amitrole	C	313	1991
62-38-4	Phenylmercuric acetate	C		1991
62-38-4	Phenylmercury acetate	C		1991
62-44-2	Phenacetin	C		1991
62-50-0	Ethyl methanesulfonate	C		1991
62-53-3	Aniline	C	313	1990
62-55-5	Thioacetamide	C	313	1990
62-56-6	Thiourea	C	313	1990
62-73-7	Dichlorvos	C	313	1990
62-73-7	Phosphoric acid, 2-dichloroethenyl dimethyl ester	C	X	1990
62-74-8	Fluoroacetic acid, sodium salt	C	X	1991
62-74-8	Sodium fluoroacetate	C	313	1991
62-75-9	Methanamine, N-methyl-N-nitroso-	C	X	1990
62-75-9	Nitrosodimethylamine	C	X	1990
62-75-9	N-Nitrosodimethylamine	C	313	1990
63-25-2	1-Naphthalenol, methylcarbamate	C	X	1990
63-25-2	Carbaryl	C	313	1990
64-00-6	Phenol, 3-(1-methylethyl)-, methyl carbamate (m-Cumenyl methylcarbamate)	C		
64-18-6	Formic acid	C	313	1991
64-19-7	Acetic acid (concentrations of 12% or less are NOT reportable)	C		1991
64-67-5	Diethyl sulfate	C	313	1990
64-75-5	Tetracycline hydrochloride		313	1995
65-85-0	Benzoic acid	C		1991

CAS	NAME	C	313	ADD
66-75-1	Uracil mustard	C		1991
67-56-1	Methanol	C	313	1990
67-63-0	Isopropyl alcohol (mfg-strong acid process)		313	1990
67-64-1	Acetone	C		
67-66-3	Chloroform	C	313	1990
67-66-3	Methane, trichloro-	C	X	1990
67-72-1	Hexachloroethane	C	313	1990
68-12-2	Dimethylformamide	C	X	
68-12-2	N,N-Dimethylformamide	C	313	1995
68-76-8	2,5-Cyclohexadiene-1,4-dione, 2,3,5-tris(1-aziridinyl)-		X	1990
68-76-8	Triaziquone		313	1990
70-25-7	Guanidine, N-methyl-N'-nitro-N-nitroso-	C		1991
70-30-4	Hexachlorophene	C	313	1991
71-36-3	n-Butyl alcohol	C	313	1990
71-43-2	Benzene	C		313
71-55-6	1,1,1-Trichloroethane	C		313
71-55-6	Methyl chloroform	C	X	1990
72-20-8	Endrin	C		1991
72-43-5	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis [4-methoxy-	C	X	1990
72-43-5	Methoxychlor	C	313	1990
72-54-8	DDD	C		1991
72-55-9	DDE	C		1991
72-57-1	Trypan blue	C	313	1991
74-83-9	Bromomethane	C	313	1990
74-83-9	Methyl bromide	C	X	1990
74-85-1	Ethene		X	1990
74-85-1	Ethylene		313	1990
74-87-3	Chloromethane	C	313	1990
74-87-3	Methane, chloro-	C	X	1990
74-87-3	Methyl chloride	C	X	1990

CAS: Chemical Abstract Service Registry Number

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The Massachusetts Toxics Use Reduction Act, Reportable Chemical List for Calendar Year 2003

Sorted Numerically by CAS

CAS	NAME	C	313	ADD
74-88-4	Methyl iodide	C	313	1990
74-89-5	Methanamine	C		1991
74-89-5	Monomethylamine	C		1991
74-90-8	Hydrocyanic acid	C	X	1990
74-90-8	Hydrogen cyanide	C	313	1990
74-93-1	Methanethiol	C	X	1991
74-93-1	Methyl mercaptan	C	313	1991
74-93-1	Thiomethanol	C	X	1991
74-95-3	Methylene bromide	C	313	1990
75-00-3	Chloroethane	C	313	1990
75-00-3	Ethane, chloro-	C	X	1990
75-00-3	Ethyl chloride	C	X	1990
75-01-4	Ethene, chloro-		X	1990
75-01-4	Vinyl chloride	C	313	1990
75-04-7	Ethanamine	C		1991
75-04-7	Monoethylamine	C		1991
75-05-8	Acetonitrile	C	313	1990
75-07-0	Acetaldehyde	C	313	
75-09-2	Dichloromethane	C	313	1990
75-09-2	Methylene chloride	C	X	1990
75-15-0	Carbon disulfide	C	313	1990
75-20-7	Calcium carbide	C		1991
75-21-8	Ethylene oxide	C	313	1990
75-21-8	Oxirane	C	X	1990
75-25-2	Bromoform	C	313	1990
75-25-2	Tribromomethane	C	X	1990
75-27-4	Dichlorobromomethane	C	313	1990
75-34-3	1,1-Dichloroethane	C	X	1991
75-34-3	Ethylidene Dichloride	C	313	1991
75-35-4	1,1-Dichloroethylene	C	X	1990
75-35-4	Ethene, 1,1-dichloro-	C	X	1990
75-35-4	Vinylidene chloride	C	313	1990

CAS	NAME	C	313	ADD
75-36-5	Acetyl chloride	C		1991
75-43-4	Dichlorofluoromethane		313	
75-43-4	HCFC-21		X	
75-44-5	Carbonic dichloride	C	X	1990
75-44-5	Phosgene	C	313	1990
75-45-6	Chlorodifluoromethane		313	
75-45-6	HCFC-22		X	
75-50-3	Methanamine, N,N-dimethyl-	C		1991
75-50-3	Trimethylamine	C		1991
75-55-8	Aziridine, 2-methyl	C	X	1990
75-55-8	Propyleneimine	C	313	
75-56-9	Oxirane, methyl-	C	X	1990
75-56-9	Propylene oxide	C	313	1990
75-60-5	Cacodylic acid	C		1991
75-63-8	Bromotrifluoromethane		313	1991
75-63-8	Halon 1301		X	1991
75-64-9	tert-Butylamine	C		1991
75-65-0	tert-Butyl alcohol		313	1990
75-68-3	1-Chloro-1,1-difluoroethane		313	
75-68-3	HCFC-142b		X	
75-69-4	CFC-11	C	X	
75-69-4	Trichlorofluoromethane	C	313	1991
75-69-4	Trichloromonofluoromethane	C	X	
75-71-8	CFC-12	C	X	
75-71-8	Dichlorodifluoromethane	C	313	
75-72-9	CFC-13		X	1995
75-72-9	Chlorotrifluoromethane		313	1995
75-77-4	Silane, chlorotrimethyl-		X	1995
75-78-5	Silane, dichlorodimethyl-		X	1995
75-79-6	Silane, trichloromethyl-		X	1995
75-86-5	2-Methylactonitrile	C	313	1991
75-86-5	Acetone cyanohydrin	C	X	

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The Massachusetts Toxics Use Reduction Act, Reportable Chemical List for Calendar Year 2003

Sorted Numerically by CAS

CAS	NAME	C	313	ADD
75-87-6	Acetaldehyde, trichloro-	C		
75-88-7	2-Chloro-1,1,1-trifluoroethane		313	1995
75-88-7	HCFC-133a		X	1995
75-99-0	2,2-Dichloropropionic acid	C		1991
76-01-7	Pentachloroethane	C	313	1991
76-02-8	Trichloroacetyl chloride		313	1995
76-06-2	Chloropicrin		313	1995
76-13-1	Ethane, 1,1,2-trichloro-1,2,2,-trifluoro-		X	1990
76-13-1	Freon 113		313	1990
76-14-2	CFC-114		X	1991
76-14-2	Dichlorotetrafluoroethane		313	1991
76-15-3	CFC-115		X	
76-15-3	Monochloropentafluoroethane		313	1991
76-44-8	1,4,5,6,7,8,8-Heptachloro-3a,4,7,7a-tetrahydro-4,7-methano-1H-indene	C	X	1990
76-44-8	Heptachlor	C	313	1990
76-87-9	Triphenyltin hydroxide		313	1995
77-47-4	Hexachlorocyclopentadiene	C	313	1990
77-73-6	Dicyclopentadiene		313	1995
77-78-1	Dimethyl sulfate	C	313	1990
78-00-2	Tetraethyl lead	C		1991
78-48-8	DEF		X	
78-48-8	S,S,S-Tributyltrithiophosphate		313	1995
78-59-1	Isophorone	C		
78-79-5	1,3-Butadiene, 2-methyl-	C		1991
78-79-5	Isoprene	C		1991
78-81-9	iso-Butylamine	C		1991
78-83-1	Isobutyl alcohol	C		
78-84-2	Isobutyraldehyde		313	1990
78-87-5	1,2-Dichloropropane	C	313	1990
78-87-5	Propane 1,2-dichloro-	C	X	1990
78-88-6	2,3-Dichloropropene	C	313	1990

CAS	NAME	C	313	ADD
78-92-2	sec-Butyl alcohol		313	1990
78-93-3	Methyl ethyl ketone	C	313	
78-93-3	Methyl ethyl ketone (MEK)	C	X	1990
78-99-9	1,1-Dichloropropane	C		1991
79-00-5	1,1,2-Trichloroethane	C	313	1990
79-01-6	Trichloroethylene	C	313	
79-06-1	Acrylamide	C	313	1990
79-09-4	Propionic acid	C		1991
79-10-7	Acrylic acid	C	313	1990
79-11-8	Chloroacetic acid	C	313	1990
79-19-6	Thiosemicarbazide	C	313	1991
79-21-0	Ethaneperoxoic acid		X	1990
79-21-0	Peracetic acid		313	1990
79-22-1	Carbonochloridic acid, methylester	C	X	1991
79-22-1	Methyl chlorocarbonate	C	313	1991
79-22-1	methyl chloroformate	C	X	1991
79-31-2	iso-Butyric acid	C		
79-34-5	1,1,2,2-Tetrachloroethane	C	313	
79-44-7	Dimethylcarbaryl chloride	C	313	1990
79-46-9	2-Nitropropane	C	313	1990
79-94-7	Tetrabromobisphenol A			
80-05-7	4,4'-Isopropylidenediphenol		313	1990
80-15-9	Cumene hydroperoxide	C	313	1990
80-15-9	Hydroperoxide, 1-methyl-1-phenylethyl-	C	X	1990
80-62-6	Methyl methacrylate	C	313	1990
81-07-2	Saccharin (manufacturing)	C	313	1991
81-07-2	Saccharin and salts	C		
81-81-2	Warfarin	C	X*	1991
81-81-2	Warfarin, & salts, conc.>0.3%	C	N874	1991
81-88-9	C.I. Food Red 15		313	1990
82-28-0	1-Amino-2-methylantraquinone		313	1990
82-68-8	PCNB	C	X	1990

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The Massachusetts Toxics Use Reduction Act, Reportable Chemical List for Calendar Year 2003

Sorted Numerically by CAS

CAS	NAME	C	313	ADD
82-68-8	Pentachloronitrobenzene	C	X	1990
82-68-8	Quintozone	C	313	1990
83-32-9	Acenaphthene	C		
84-66-2	Diethyl phthalate	C	313	
84-74-2	Dibutyl phthalate	C	313	1990
84-74-2	n-Butyl phthalate	C	X	1990
85-00-7	Diquat	C		1991
85-01-8	Phenanthrene	C	313	1991
85-44-9	Phthalic anhydride	C	313	1990
85-68-7	Butyl benzyl phthalate	C		1990
86-30-6	N-Nitrosodiphenylamine	C	313	1990
86-50-0	Azinphos-methyl	C		1991
86-50-0	Guthion	C		1991
86-73-7	Fluorene	C		1991
86-88-4	Antu	C		1991
86-88-4	Thiourea, 1-naphthalenyl-	C		1991
87-62-7	2,6-Xylidine		313	1990
87-65-0	2,6-Dichlorophenol	C	*	1991
87-68-3	Hexachloro-1,3-butadiene	C	313	1990
87-68-3	Hexachlorobutadiene	C	X	1990
87-86-5	PCP	C	X	1990
87-86-5	Pentachlorophenol	C	313	
88-06-2	2,4,6-Trichlorophenol	C	313	1990
88-72-2	o-Nitrotoluene	C		1991
88-75-5	2-Nitrophenol	C	313	1990
88-85-7	Dinitrobutyl phenol	C	313	1991
88-85-7	Dinoseb	C	X	1991
88-89-1	Picric acid		313	1990
90-04-0	o-Anisidine	C	313	1990
90-43-7	2-Phenylphenol		313	1990
90-94-8	Michler's ketone		313	1990
91-08-7	Benzene, 1,3-diisocyanato-2-methyl-	C	X	1990

CAS	NAME	C	313	ADD
91-08-7	Toluene-2,6-diisocyanate	C	313	1990
91-20-3	Naphthalene	C	313	1990
91-22-5	Quinoline	C	313	
91-58-7	2-Chloronaphthalene	C		
91-59-8	beta-Naphthylamine	C	313	1990
91-66-7	N,N-Diethylaniline	C		
91-66-7	N,N-Diethylaniline	C		
91-80-5	Methapyrilene	C		1991
91-93-0	3,3'-Dimethoxybenzidine-4,4'-diisocyanate		313*	1995
91-94-1	3,3'-Dichlorobenzidine	C	313	1990
91-97-4	3,3'-Dimethyl-4,4'-diphenylene diisocyanate		313*	1995
92-52-4	Biphenyl	C	313	1990
92-67-1	4-Aminobiphenyl	C	313	1990
92-87-5	Benzidine	C	313	
92-93-3	4-Nitrobiphenyl	C	313	1990
93-65-2	Mecoprop		313	
93-72-1	Silvex (2,4,5-TP)	C		1991
93-76-5	2,4,5-T acid	C		1991
93-79-8	2,4,5-T esters	C		1991
94-11-1	2,4-D Esters	C	X	1991
94-11-1	2,4-D isopropyl ester	C	313	1991
94-36-0	Benzoyl peroxide		313	1990
94-58-6	Dihydrosafrole	C	313	1991
94-59-7	Safrole	C	313	1990
94-74-6	(4-Chloro-2-methylphenoxy) acetic acid		X	1995
94-74-6	MCPA		X	1995
94-74-6	Methoxone		313	
94-75-7	2,4-D	C	313	1990
94-75-7	2,4-D Acid	C	X	1990
94-75-7	2,4-D, salts and esters	C		
94-75-7	Acetic acid, (2,4-dichlorophenoxy)-	C	X	1990
94-79-1	2,4-D Esters	C		1991

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The Massachusetts Toxics Use Reduction Act, Reportable Chemical List for Calendar Year 2003

Sorted Numerically by CAS

CAS	NAME	C	313	ADD
94-80-4	2,4-D butyl ester	C	313	1991
94-80-4	2,4-D Esters	C	X	1991
94-82-6	2,4-DB		313	1995
95-06-7	Carbamodithioic acid, diethyl-, 2-chloro-2-propenyl ester(sulfallate)	C		
95-47-6	Benzene, o-dimethyl-	C	X	1990
95-47-6	o-Xylene	C	313	1990
95-48-7	o-Cresol	C	313	1990
95-50-1	1,2-Dichlorobenzene	C	313	1990
95-50-1	o-Dichlorobenzene	C	X	1990
95-53-4	o-Toluidine	C	313	1990
95-54-5	1,2-Phenylenediamine		313	1995
95-57-8	2-Chlorophenol	C		* 1991
95-63-6	1,2,4-Trimethylbenzene		313	1990
95-69-2	p-Chloro-o-toluidine		313	1995
95-80-7	2,4-Diaminotoluene	C	313	1990
95-94-3	1,2,4,5-Tetrachlorobenzene	C		
95-95-4	2,4,5-Trichlorophenol	C	313	1990
96-09-3	Styrene oxide	C	313	
96-12-8	1,2-Dibromo-3-chloropropane	C	313	
96-12-8	DBCP	C	X	1990
96-18-4	1,2,3-Trichloropropane		313	1995
96-33-3	Methyl acrylate		313	1990
96-45-7	Ethylene thiourea	C	313	1990
97-23-4	2,2'-Methylenebis(4-chlorophenol)		X	1995
97-23-4	Dichlorophene		313	1995
97-56-3	C.I. Solvent Yellow 3		313	1990
97-63-2	Ethyl methacrylate	C		
97-74-5	Bis(dimethylthiocarbamoyl) sulfide (tetramethylthiurammonosulfide)	C		
97-77-8	Thioperoxydicarbonic diamide,tetraethyl (Disulfiram)	C		

CAS	NAME	C	313	ADD
98-01-1	Furfural		C	
98-07-7	Benzoic trichloride	C	313	
98-07-7	Benzotrichloride	C	X	1990
98-09-9	Benzenesulfonyl chloride	C		1991
98-82-8	Cumene	C	313	1990
98-86-2	Acetophenone	C	313	1991
98-87-3	Benzal chloride	C	313	1990
98-88-4	Benzoyl chloride	C	313	1990
98-95-3	Nitrobenzene	C	313	1990
99-08-1	m-Nitrotoluene	C		1991
99-30-9	2,6-Dichloro-4-nitroaniline		X	1995
99-30-9	Dichloran		313	1995
99-35-4	1,3,5-Trinitrobenzene	C		1991
99-55-8	5-Nitro-o-toluidine	C	313	1991
99-59-2	5-Nitro-o-anisidine		313	1990
99-65-0	m-Dinitrobenzene	C	313	
99-99-0	p-Nitrotoluene	C		1991
100-01-6	p-Nitroaniline	C	313	1991
100-02-7	4-Nitrophenol	C	313	1990
100-02-7	p-Nitrophenol	C	X	
100-25-4	p-Dinitrobenzene	C	313	1990
100-41-4	Ethylbenzene	C	313	1990
100-42-5	Styrene	C	313	
100-44-7	Benzyl chloride	C	313	1990
100-47-0	Benzonitrile	C		1991
100-75-4	N-Nitrosopiperidine	C	313	1990
101-05-3	4,6-Dichloro-N-(2-chlorophenyl)-1,3,5-triazin-2-amine		X	1995
101-05-3	Anilazine		313	1995
101-14-4	4,4'-Methylenebis(2-chloroaniline)	C	313	
101-14-4	MBOCA	C	X	1990
101-27-9	Carbamic, (3-chlorophenyl)-,4-chloro-2-butyryl	C		

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Sorted Numerically by CAS

CAS	NAME	C	313	ADD
	ester(barban)			
101-55-3	4-Bromophenyl phenyl ether	C		
101-61-1	4,4'-Methylenebis(N,N-dimethyl)benzenamine		313	1990
101-68-8	MDI	C	X*	1990
101-77-9	4,4'-Methylenedianiline	C	313	
101-80-4	4,4'-Diaminodiphenyl ether		313	1990
101-90-6	Diglycidyl resorcinol ether		313	1995
103-85-5	Phenylthiourea	C		1991
104-12-1	p-Chlorophenyl isocyanate		313	1995
104-49-4	1,4-Phenylene diisocyanate		313*	1995
104-94-9	p-Anisidine		313	1990
105-46-4	sec-Butyl acetate	C		1991
105-67-9	2,4-Dimethylphenol	C	313	1990
106-42-3	Benzene, p-dimethyl-	C	X	1990
106-42-3	p-Xylene	C	313	1990
106-44-5	p-Cresol	C	313	1990
106-46-7	1,4-Dichlorobenzene	C	313	1990
106-47-8	p-Chloroaniline	C	313	1991
106-49-0	p-Toluidine	C		1991
106-50-3	p-Phenylenediamine	C	313	1990
106-51-4	p-Benzoquinone	C	X	1990
106-51-4	Quinone	C	313	1990
106-88-7	1,2-Butylene oxide	C	313	1990
106-89-8	Epichlorohydrin	C	313	1990
106-89-8	Oxirane, (chloromethyl)-	C	X	1990
106-93-4	1,2-Dibromoethane	C	313	1990
106-93-4	Ethylene dibromide	C	X	1990
106-99-0	1,3-Butadiene	C	313	1990
107-02-8	2-Propenal	C	X	1990
107-02-8	Acrolein	C	313	1990

CAS	NAME	C	313	ADD
107-05-1	Allyl chloride	C	313	
107-06-2	1,2-Dichloroethane	C	313	1990
107-06-2	Ethylene dichloride	C	X	1990
107-10-8	n-Propylamine	C		1991
107-11-9	2-Propen-1-amine		X	
107-11-9	Allylamine		313	1995
107-12-0	Ethyl cyanide	C		1991
107-12-0	Propanenitrile	C		1991
107-12-0	Propionitrile	C		1991
107-13-1	2-Propenenitrile	C	X	1990
107-13-1	Acrylonitrile	C	313	1990
107-15-3	1,2-Ethanediamine	C		1991
107-15-3	Ethylenediamine	C		1991
107-18-6	2-Propen-1-ol	C	X	1990
107-18-6	Allyl alcohol	C	313	1990
107-19-7	Propargyl alcohol	C	313	1991
107-20-0	Chloroacetaldehyde	C		1991
107-21-1	Ethylene glycol	C	313	1990
107-30-2	Chloromethyl methyl ether	C	313	1990
107-30-2	Methane, chloromethoxy-	C	X	1990
107-49-3	Tepp	C		1991
107-49-3	Tetraethyl pyrophosphate	C		1991
107-92-6	Butyric acid	C		1991
108-05-4	Acetic acid ethenyl ester	C	X	1990
108-05-4	Vinyl acetate	C	313	1990
108-05-4	Vinyl acetate monomer	C	X	1990
108-10-1	Methyl isobutyl ketone	C	313	1990
108-24-7	Acetic anhydride	C		1991
108-31-6	Maleic anhydride	C		313
108-38-3	Benzene, m-dimethyl-	C	X	1990
108-38-3	m-Xylene	C	313	1990
108-39-4	m-Cresol	C	313	1990

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CAS	NAME	C	313	ADD
108-45-2	1,3-Phenylenediamine		313	1995
108-46-3	Resorcinol	C		1991
108-60-1	Bis(2-chloro-1-methylethyl)ether	C	313	
108-60-1	Dichloroisopropyl ether	C	X	1990
108-88-3	Toluene	C	313	1990
108-90-7	Chlorobenzene	C	313	1990
108-93-0	Cyclohexanol		313	1995
108-94-1	Cyclohexanone	C		1991
108-95-2	Phenol	C	313	1990
108-98-5	Benzenethiol	C		1991
108-98-5	Thiophenol	C		1991
109-06-8	2-Methylpyridine	C	313	
109-06-8	2-Picoline	C	X	1991
109-73-9	Butylamine	C		1991
109-77-3	Malononitrile	C	313	1991
109-86-4	2-Methoxyethanol		313	1990
109-89-7	Diethylamine	C		1991
109-99-9	Furan, tetrahydro-	C		1991
110-00-9	Furan	C		1991
110-16-7	Maleic acid	C		
110-17-8	Fumaric acid	C		
110-19-0	iso-Butyl acetate	C		1991
110-54-3	Hexane	C	X	1995
110-54-3	n-Hexane	C	313	1995
110-57-6	trans-1,4-Dichloro-2-butene		313	1995
110-57-6	trans-1,4-Dichlorobutene		X	1995
110-75-8	2-Chloroethyl vinyl ether	C		1991
110-80-5	2-Ethoxyethanol	C	313	1990
110-80-5	Ethanol, 2-ethoxy-	C	X	1990
110-82-7	Cyclohexane	C	313	1990
110-86-1	Pyridine	C	313	1990
111-42-2	Diethanolamine	C	313	1990

CAS	NAME	C	313	ADD
111-44-4	Bis(2-chloroethyl) ether	C	313	1990
111-44-4	Dichloroethyl ether	C	X	1990
111-54-6	Ethylenebisdithiocarbamic acid, salts & esters	C	N171	1991
111-91-1	Bis(2-chloroethoxy) methane	C	313	1991
114-26-1	Phenol, 2-(1-methylethoxy)-, methylcarbamate	C	X	1990
114-26-1	Propoxur	C	313	
115-02-6	Azaserine	C		1991
115-07-1	1-Propene		X	1990
115-07-1	Propene		X	1990
115-07-1	Propylene		313	1990
115-28-6	Chlorendic acid		313	1995
115-29-7	Endosulfan	C		1991
115-32-2	Benzenemethanol, 4-chloro-.alpha.-4-chlorophenyl)-.alpha.-(trichloromethyl)-	C	X	1990
115-32-2	Dicofol	C	313	1990
116-06-3	Aldicarb	C	313	1991
117-79-3	2-Aminoanthraquinone		313	1990
117-80-6	Dichlone	C		1991
117-81-7	Bis(2-ethylhexyl)phthalate	C	X	1990
117-81-7	DEHP	C	X	1990
117-81-7	Di(2-ethylhexyl) phthalate	C	313	1990
117-84-0	Di-n-octyl phthalate	C		1990
117-84-0	n-Dioctylphthalate	C		1990
118-74-1	Hexachlorobenzene	C	313	1990
119-38-0	Carbamic acid,dimethyl-, 3-methyl-1-(1-methylethyl)-1H-pyrazol-5-yl ester (isolan)	C		
119-90-4	3,3'-Dimethoxybenzidine	C	313	1990
119-93-7	3,3'-Dimethylbenzidine	C	313	1990
119-93-7	o-Tolidine		C	X
120-12-7	Anthracene	C	313	1990
120-36-5	2,4-DP		313	1995
120-54-7	Piperidine, 1,1-(tetrathiodicarbonothioyl)-bis-	C		

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The Massachusetts Toxics Use Reduction Act, Reportable Chemical List for Calendar Year 2003

Sorted Numerically by CAS

CAS	NAME	C	313	ADD
	(Bis(pentamethylene)thiuram tetrasulfide)			
120-58-1	Isosafrole	C	313	1990
120-71-8	p-Cresidine		313	1990
120-80-9	Catechol	C	313	1990
120-82-1	1,2,4-Trichlorobenzene	C	313	1990
120-83-2	2,4-Dichlorophenol	C	313	1990
121-14-2	2,4-Dinitrotoluene	C	313	1990
121-21-1	Pyrethrins	C		1991
121-29-9	Pyrethrins	C		1991
121-44-8	Triethylamine	C	313	
121-69-7	N,N-Dimethylaniline	C	313	1990
121-75-5	Malathion	C	313	1991
122-09-8	Benzeneethanamine, alpha,alpha-dimethyl-	C		1991
122-34-9	Simazine		313	1995
122-39-4	Diphenylamine		313	1995
122-42-9	Carbamic acid, phenyl-, 1-methylethyl ester (propham)	C		
122-66-7	1,2-Diphenylhydrazine	C	313	1990
122-66-7	Hydrazine, 1,2-diphenyl-	C	X	
122-66-7	Hydrazobenzene	C	X	1990
123-31-9	Hydroquinone (manufactured only)	C	313	1990
123-33-1	Maleic hydrazide	C		
123-38-6	Propionaldehyde	C	313	1990
123-61-5	1,3-Phenylene diisocyanate		313*	1995
123-62-6	Propionic anhydride	C		1991
123-63-7	Paraldehyde	C	313	1991
123-72-8	Butyraldehyde		313	1990
123-73-9	2-Butenal, (e)-	C		1991
123-73-9	Crotonaldehyde, (E)-	C		1991
123-86-4	Butyl acetate	C		1991
123-91-1	1,4-Dioxane	C	313	1990
123-92-2	iso-Amyl acetate	C		1991

CAS	NAME	C	313	ADD
124-04-9	Adipic acid	C		
124-40-3	Dimethylamine	C	313	
124-40-3	Methanamine, N-methyl-	C	X	1991
124-41-4	Sodium methylate	C		1991
124-48-1	Chlorodibromomethane	C		1991
124-73-2	Dibromotetrafluoroethane		313	1991
124-73-2	Halon 2402		X	1991
126-72-7	Tris(2,3-dibromopropyl) phosphate	C	313	1990
126-98-7	2-Propenenitrile, 2-methyl-	C	X	1991
126-98-7	methacrylonitrile	C	313	
126-99-8	Chloroprene	C	313	
127-18-4	Perchloroethylene	C	X	
127-18-4	Tetrachloroethylene	C	313	1990
127-82-2	Zinc phenolsulfonate	C	*	1991
128-03-0	Potassium dimethyldithiocarbamate		313	1995
128-04-1	Sodium dimethyldithiocarbamate		313	1995
128-66-5	C.I. Vat Yellow 4		313	1990
129-00-0	Pyrene	C		1991
130-15-4	1,4-Naphthoquinone	C		
131-11-3	Dimethyl phthalate	C	313	1990
131-52-2	Sodium pentachlorophenate		313	1995
131-74-8	Ammonium picrate	C		1991
131-89-5	2-Cyclohexyl-4,6-dinitrophenol	C		1991
132-27-4	Sodium o-phenylphenoxide		313	1995
132-64-9	Dibenzofuran	C	313	1990
133-06-2	1H-Isoindole-1,3(2H)-dione, 3a,4,7,7a-tetrahydro-2-[(trichloromethyl)thio]-	C	X	
133-06-2	Captan	C	313	1990
133-07-3	Folpet		313	
133-90-4	Benzoic acid, 3-amino-2,5-dichloro-	C	X	1990
133-90-4	Chloramben	C	313	1990
134-29-2	o-Anisidine hydrochloride		313	1990

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The Massachusetts Toxics Use Reduction Act, Reportable Chemical List for Calendar Year 2003

Sorted Numerically by CAS

CAS	NAME	C	313	ADD
134-32-7	alpha-Naphthylamine	C	313	1990
135-20-6	Benzeneamine, N-hydroxy-N-nitroso, ammonium salt		X	1990
135-20-6	Cupferron		313	1990
136-30-1	Carbamodithioic acid, dibutyl, sodium salt (Sodium dibutylidithiocarbamate)	C		
136-45-8	Dipropyl isocinchomeronate		313	1995
137-26-8	Thiram	C	313	
137-29-1	Copper, bis(dimethylcarbamodithioato-S-S)-(copper dimethyldithiocarbamate)	C	*	
137-30-4	Zinc, bis(dimethylcarbamodithioato-S,S)-, (ziram)	C	*	
137-41-7	Potassium N-methyldithiocarbamate		313	1995
137-42-8	Metham sodium		313	1995
137-42-8	Sodium methyldithiocarbamate		X	1995
138-93-2	Disodium cyanodithioimidocarbonate		313	1995
139-13-9	Nitrilotriacetic acid		313	1990
139-25-3	3,3'-Dimethyldiphenylmethane-4,4'-diisocyanate		313*	1995
139-65-1	4,4'-Thiodianiline		313	1990
140-88-5	Ethyl acrylate	C	313	1990
141-32-2	Butyl acrylate		313	1990
141-78-6	Ethyl acetate	C		1991
142-28-9	1,3-Dichloropropane	C		1991
142-59-6	Nabam		313	1995
142-71-2	Cupric acetate	C		1991
142-84-7	Dipropylamine	C		1991
143-33-9	Sodium cyanide (Na(CN))	C	*	
143-50-0	Kepone	C		
144-34-3	Carbamodithioic acid, dimethyl-, tetraanhydrosulfid with orthothioselenious acid(selenium, tetrakis(dimethyldithiocarbamate))	C	*	
145-73-3	Endothall	C		
148-18-5	Carbamodithioic acid, diethyl-,sodium salt	C		

CAS	NAME	C	313	ADD
	(sodium diethyldithiocarbamate)			
148-79-8	2-(4-Thiazolyl)-1H-benzimidazole		X	1995
148-79-8	Thiabendazole		313	1995
148-82-3	Melphalan	C		1991
149-30-4	2-Mercaptobenzothiazole		313	1995
149-30-4	MBT		X	1995
150-50-5	Merphos		313	1995
150-68-5	Monuron			313
151-50-8	Potassium cyanide	C	*	1991
151-56-4	Aziridine	C	X	1990
151-56-4	Ethyleneimine	C	313	1990
152-16-9	Diphosphoramidate, octamethyl-	C		1991
156-10-5	p-Nitrosodiphenylamine		313	1990
156-60-5	1,2-Dichloroethylene	C		1991
156-62-7	Calcium cyanamide	C	313	
189-55-9	Benzo(rst)pentaphene	C	313*	
189-55-9	Dibenz[a,i]pyrene	C	X*	1991
189-64-0	Dibenzo(a,h)pyrene		313*	1995
191-24-2	Benzo[ghi]perylene	C		
191-30-0	Dibenzo(a,l)pyrene		313*	1995
192-65-4	Dibenzo(a,e)pyrene		313*	1995
193-39-5	Indeno(1,2,3-cd)pyrene	C	313*	1991
194-59-2	7H-Dibenzo(c,g)carbazole		313*	1995
196-86-9	6-Methyl-1,3-dithiolo[4,5-b]quinoxalin-2-one		X	1995
196-86-9	Chinomethionat		313	1995
197-14-3	Dodecylguanidine monoacetate		X	1995
197-14-3	Dodine		313	1995
205-82-3	Benzo(j)fluoranthene		313*	1995
205-99-2	Benzo[b]fluoranthene	C	313*	1992
206-44-0	Fluoranthene	C	*	
207-08-9	Benzo(k)fluoranthene	C	313*	1992
208-96-8	Acenaphthylene	C		

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The Massachusetts Toxics Use Reduction Act, Reportable Chemical List for Calendar Year 2003

Sorted Numerically by CAS

CAS	NAME	C	313	ADD
218-01-9	Benzo(a)phenanthrene	C	313*	1992
218-01-9	Chrysene	C	X*	1992
224-42-0	Dibenz(a,j)acridine		313*	1995
225-51-4	Benz[c]acridine	C		1992
226-36-8	Dibenz(a,h)acridine		313*	1995
297-97-2	O,O-Diethyl O-pyrazinyl phosphorothioate	C		1992
297-97-2	Thionazin	C		1992
298-00-0	Methyl parathion	C	313	1992
298-00-0	Parathion-methyl	C	X	
298-02-2	Phorate	C		
298-04-4	Disulfoton	C		1992
300-76-5	Naled	C	313	1992
301-04-2	Lead acetate	C	*	1992
301-12-2	Oxydemeton methyl		313	1995
301-12-2	S-(2-(Ethylsulfanyl)ethyl) O,O-dimethyl ester phosphorothioic acid		X	1995
302-01-2	Hydrazine	C	313	1990
303-34-4	Lasiocarpine	C		1992
305-03-3	Chlorambucil	C		1992
306-83-2	2,2-Dichloro-1,1,1-trifluoroethane		313	
306-83-2	HCFC-123		X	
309-00-2	1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-(1.alpha.,4.alpha.,4a.beta.,5.alpha.,8.alpha.,8a.beta.)-	C	X	1990
309-00-2	Aldrin	C	313	1990
311-45-5	Diethyl-p-nitrophenyl phosphate	C		1992
314-40-9	5-Bromo-6-methyl-3-(1-methylpropyl)-2,4-(1H,3H)-pyrimidinedione		X	1995
314-40-9	Bromacil		313	1995
315-18-4	Mexacarbate	C		1992
319-84-6	alpha-BHC	C	X	1992

CAS	NAME	C	313	ADD
319-84-6	alpha-Hexachlorocyclohexane	C	313	1992
319-85-7	beta-BHC	C		1992
319-86-8	delta-BHC	C		1992
329-71-5	2,5-Dinitrophenol	C		1992
330-54-1	Diuron	C		313
330-55-2	Linuron			313
333-41-5	Diazinon	C		313
334-88-3	Diazomethane	C		313
353-50-4	Carbonic difluoride	C		
353-59-3	Bromochlorodifluoromethane		313	1992
353-59-3	Halon 1211		X	1992
354-11-0	1,1,1,2-Tetrachloro-2-fluoroethane		313	1995
354-11-0	HCFC-121a		X	1995
354-14-3	1,1,2,2-Tetrachloro-1-fluoroethane		313	1995
354-14-3	HCFC-121		X	1995
354-23-4	1,2-Dichloro-1,1,2-trifluoroethane		313	
354-23-4	HCFC-123a		X	
354-25-6	1-Chloro-1,1,2,2-tetrafluoroethane		313	
354-25-6	HCFC-124a		X	
357-57-3	Brucine	C	313	
422-44-6	1,2-Dichloro-1,1,2,3,3-pentafluoropropane		313	1995
422-44-6	HCFC-225bb		X	1995
422-48-0	2,3-Dichloro-1,1,1,2,3-pentafluoropropane		313	1995
422-48-0	HCFC-225ba		X	1995
422-56-0	3,3-Dichloro-1,1,1,2,2-pentafluoropropane		313	1995
422-56-0	HCFC-225ca		X	1995
431-86-7	1,2-Dichloro-1,1,3,3,3-pentafluoropropane		313	1995
431-86-7	HCFC-225da		X	1995
460-19-5	Cyanogen	C	*	1992
460-19-5	Ethanedinitrile	C		1992
460-35-5	3-Chloro-1,1,1-trifluoropropane		313	1995
460-35-5	HCFC-253fb		X	1995

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Sorted Numerically by CAS

CAS	NAME	C	313	ADD
463-58-1	Carbon oxide sulfide (COS)	C	X	1990
463-58-1	Carbonyl sulfide	C	313	1990
465-73-6	Isodrin	C	313	1992
492-80-8	Auramine	C	X	1990
492-80-8	C.I. Solvent Yellow 34	C	313	1990
494-03-1	Chlornaphazine	C		
496-72-0	Diaminotoluene	C		
504-24-5	4-Aminopyridine	C		1992
504-24-5	Pyridine, 4-amino-	C		1992
504-60-9	1,3-Pentadiene	C		1992
505-60-2	Ethane, 1,1'-thiobis[2-chloro-		X	1995
505-60-2	Mustard gas		X	1995
506-61-6	Potassium silver cyanide	C		* 1992
506-64-9	Silver cyanide	C		* 1992
506-68-3	Cyanogen bromide	C	*	
506-77-4	Cyanogen chloride	C	*	
506-77-4	Cyanogen chloride ((CN)Cl)	C		* 1992
506-87-6	Ammonium carbonate	C		1992
506-96-7	Acetyl bromide	C		1992
507-55-1	1,3-Dichloro-1,1,2,2,3-pentafluoropropane		313	1995
507-55-1	HCFC-225cb		X	1995
509-14-8	Methane, tetranitro-	C		1992
509-14-8	Tetranitromethane	C		1992
510-15-6	Benzeneacetic acid, 4-chloro-.alpha.-(4-chlorophenyl)-.alpha.-hydroxy-, ethyl ester	C	X	
510-15-6	Chlorobenzilate	C	313	
513-49-5	sec-Butylamine	C		1992
528-29-0	o-Dinitrobenzene	C	313	1990
532-27-4	2-Chloroacetophenone	C	313	1990
533-74-4	Dazomet		313	
533-74-4	Tetrahydro-3,5-dimethyl-2H-1,3,5-thiadiazine-2-thione		X	1995

CAS	NAME	C	313	ADD
534-52-1	4,6-Dinitro-o-cresol	C	313	1990
534-52-1	4,6-Dinitro-o-cresol and salts	C		1992
534-52-1	Dinitrocresol	C	X	1992
540-59-0	1,2-Dichloroethylene		313	1990
540-73-8	Hydrazine, 1,2-dimethyl-	C		
540-84-1	2,2,4-Trimethylpentane	C		
540-84-1	2,2,4-Trimethylpentane	C		
540-88-5	tert-Butyl acetate	C		1992
541-09-3	Uranyl acetate	C		1992
541-41-3	Ethyl chloroformate		313	1990
541-53-7	2,4-Dithiobiuret	C	313	1992
541-53-7	Dithiobiuret	C	X	1992
541-73-1	1,3-Dichlorobenzene	C	313	1990
542-62-1	Barium cyanide	C	*	1992
542-75-6	1,3-Dichloropropene	C	X	1990
542-75-6	1,3-Dichloropropylene	C	313	1990
542-76-7	3-Chloropropionitrile	C	313	1992
542-76-7	Propionitrile, 3-chloro-	C	X	1992
542-88-1	Bis(chloromethyl) ether	C	313	1990
542-88-1	Chloromethyl ether	C	X	1990
542-88-1	Dichloromethyl ether	C	X	
542-88-1	Methane, oxybis[chloro-	C	X	1990
543-90-8	Cadmium acetate	C	*	
544-18-3	Cobaltous formate	C	*	
544-92-3	Copper cyanide	C		* 1992
554-13-2	Lithium carbonate		313	1995
554-84-7	m-Nitrophenol	C		1992
556-61-6	Isothiocyanatomethane		X	1995
556-61-6	Methyl isothiocyanate		313	1995
557-19-7	Nickel cyanide	C	*	
557-21-1	Zinc cyanide	C		* 1992
557-34-6	Zinc acetate	C	*	

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CAS	NAME	C	313	ADD
557-41-5	Zinc formate	C	*	1992
563-12-2	Ethion	C		1992
563-47-3	3-Chloro-2-methyl-1-propene		313	1995
563-68-8	Thallium(I) acetate	C	*	1992
569-64-2	C.I. Basic Green 4		313	1990
573-56-8	2,6-Dinitrophenol	C		1992
584-84-9	Benzene, 2,4-diisocyanato-1-methyl-	C	X	1990
584-84-9	Toluene-2,4-diisocyanate	C	313	1990
591-08-2	1-Acetyl-2-thiourea	C		1992
592-01-8	Calcium cyanide	C	*	1992
592-04-1	Mercuric cyanide	C	*	1992
592-85-8	Mercuric thiocyanate	C	*	1992
592-87-0	Lead thiocyanate	C	*	1992
593-60-2	Vinyl bromide	C	313	1990
594-42-3	Methanesulfonyl chloride, trichloro-	C		1992
594-42-3	Perchloromethyl mercaptan	C	313	1992
594-42-3	Trichloromethanesulfonyl chloride	C	X	1992
598-31-2	Bromoacetone	C		1992
601-64-9	DDE	C		
601-64-9	DDET	C		
606-20-2	2,6-Dinitrotoluene	C	313	
608-73-1	Hexachlorocyclohexane (all isomers) CAS 608-73-1	C		
608-93-5	Pentachlorobenzene	C		
609-19-8	3,4,5-Trichlorophenol	C	*	
610-39-9	3,4-Dinitrotoluene	C		1992
612-82-8	3,3'-Dimethylbenzidine dihydrochloride		313	1995
612-82-8	o-Tolidine dihydrochloride		X	1995
612-83-9	3,3'-Dichlorobenzidine dihydrochloride		313	1995
615-05-4	2,4-Diaminoanisole		313	1990
615-28-1	1,2-Phenylenediamine dihydrochloride		313	1995
615-53-2	N-Nitroso-N-methylurethane	C		1992

CAS	NAME	C	313	ADD
621-64-7	Di-n-propylnitrosamine	C	X	1990
621-64-7	N-Nitrosodi-n-propylamine	C	313	1990
624-18-0	1,4-Phenylenediamine dihydrochloride		313	1995
624-83-9	Methane, isocyanato-	C	X	
624-83-9	Methyl isocyanate	C	313	1990
625-16-1	tert-Amyl acetate	C		1992
626-38-0	sec-Amyl acetate	C		1992
628-63-7	Amyl acetate	C		1992
628-86-4	Mercury fulminate	C	*	
630-10-4	Selenourea	C	*	1992
630-20-6	1,1,1,2-Tetrachloroethane	C	313	1992
630-20-6	Ethane, 1,1,1,2-tetrachloro-	C	X	1992
631-61-8	Ammonium acetate	C		1992
636-21-5	o-Toluidine hydrochloride	C	313	1990
639-58-7	Triphenyltin chloride		313	1995
640-19-7	Fluoroacetamide	C		1992
644-64-4	Carbamic acid, dimethyl-, 1- [(dimethylamino)carbonyl]-5-methyl-1H-pyrazol-3-y-l ester(Dimetilan)	C		
680-31-9	Hexamethylphosphoramide	C	313	1990
684-93-5	N-Nitroso-N-methylurea	C	313	1990
692-42-2	Diethylarsine	C	*	1992
696-28-6	Dichlorophenylarsine	C	*	1992
696-28-6	Phenyl dichloroarsine	C		
709-98-8	N-(3,4-Dichlorophenyl)propanamide		X	1995
709-98-8	Propanil		313	1995
757-58-4	Hexaethyl tetraphosphate	C		1992
759-73-9	N-Nitroso-N-ethylurea	C	313	
759-94-4	EPTC		X	
759-94-4	Ethyl dipropylthiocarbamate		313	1995
764-41-0	1,4-Dichloro-2-butene	C	313	1992
764-41-0	2-Butene, 1,4-dichloro-	C	X	1992

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The Massachusetts Toxics Use Reduction Act, Reportable Chemical List for Calendar Year 2003

Sorted Numerically by CAS

CAS	NAME	C	313	ADD
765-34-4	Glycidylaldehyde	C		1992
812-04-4	1,1-Dichloro-1,2,2-trifluoroethane		313	
812-04-4	HCFC-123b		X	
815-82-7	Cupric tartrate	C	*	
822-06-0	Hexamethylene-1,6-diisocyanate	C	313*	1995
823-40-5	Diaminotoluene	C		
834-12-8	Ametryn		313	1995
834-12-8	N-Ethyl-N'-(1-methylethyl)-6-(methylthio)-1,3,5,-triazine-2,4-diamine		X	1995
842-07-9	C.I. Solvent Yellow 14		313	1990
872-50-4	N-Methyl-2-pyrrolidone		313	1995
924-16-3	N-Nitrosodi-n-butylamine	C	313	1990
924-42-5	N-Methylolacrylamide		313	1995
930-55-2	N-Nitrosopyrrolidine	C		
933-75-5	2,3,6-Trichlorophenol	C	*	
933-78-8	2,3,5-Trichlorophenol	C	*	1992
957-51-7	Diphenamid		313	
959-98-8	alpha - Endosulfan	C		1992
961-11-5	Phosphoric acid, 2-chloro-1-(2,3,5-trichlorophenyl) ethenyl dimethyl ester		X	1990
961-11-5	Tetrachlorvinphos		313	1990
989-38-8	C.I. Basic Red 1		313	1990
1024-57-3	Heptachlor epoxide	C		
1031-07-8	Endosulfan sulfate	C		1992
1066-30-4	Chromic acetate	C	*	1992
1066-33-7	Ammonium bicarbonate	C		1992
1072-35-1	Lead stearate	C	*	1992
1111-78-0	Ammonium carbamate	C		1992
1114-71-2	Butylethylcarbamothioic acid S-propyl ester		X	1995
1114-71-2	Pebulate		313	
1116-54-7	N-Nitrosodiethanolamine	C		1992
1120-71-4	1,3-Propane sultone	C	X	1990

CAS	NAME	C	313	ADD
1120-71-4	Propane sultone	C	313	1990
1129-41-5	Carbamic acid, methyl- 3-methylphenyl ester (metolcarb)	C		
1134-23-2	Cycloate		313	1995
1163-19-5	Decabromodiphenyl oxide		313	1990
1185-57-5	Ferric ammonium citrate	C		1992
1194-65-6	Dichlobenil	C		1992
1300-71-6	Xylenol	C		1992
1303-28-2	Arsenic pentoxide	C	*	
1303-32-8	Arsenic disulfide	C	*	
1303-33-9	Arsenic trisulfide	C	*	1992
1309-64-4	Antimony trioxide	C	*	1992
1310-58-3	Potassium hydroxide	C		1992
1310-73-2	Sodium hydroxide	C		1992
1313-27-5	Molybdenum trioxide		313	1990
1314-20-1	Thorium dioxide		313	1990
1314-32-5	Thallic oxide	C	*	1992
1314-62-1	Vanadium pentoxide	C		1992
1314-80-3	Sulfur phosphide	C		1992
1314-84-7	Zinc phosphide	C	*	1992
1314-84-7	Zinc phosphide (conc. <= 10%)	C	*	1992
1314-84-7	Zinc phosphide (conc. > 10%)	C		1992
1314-87-0	Lead sulfide	C	*	1992
1319-72-8	2,4,5-T amines	C		1992
1319-77-3	Cresol (mixed isomers)	C	313	1990
1320-18-9	2,4-D Esters	C	X	1992
1320-18-9	2,4-D propylene glycol butyl ether ester	C	313	1992
1321-12-6	Nitrotoluene	C		1992
1327-52-2	Arsenic acid	C	*	1992
1327-53-3	Arsenic trioxide	C	*	1992
1327-53-3	Arsenous oxide	C	*	
1330-20-7	Xylene (mixed isomers)	C	313	1990

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Sorted Numerically by CAS

CAS	NAME	C	313	ADD
1332-07-6	Zinc borate	C	*	1992
1332-21-4	Asbestos (friable)	C	313	1990
1333-83-1	Sodium bifluoride	C		1992
1335-32-6	Lead subacetate	C	*	1992
1335-87-1	Hexachloronaphthalene		313	1990
1336-21-6	Ammonium hydroxide	C		
1336-36-3	PCBs	C	X	1990
1336-36-3	Polychlorinated biphenyls	C	313	1990
1338-23-4	Methyl ethyl ketone peroxide	C		1992
1338-24-5	Naphthenic acid	C		1992
1341-49-7	Ammonium bifluoride	C		1992
1344-28-1	Aluminum oxide (fibrous forms)		313	1990
1464-53-5	2,2'-Bioxirane	C	X	1990
1464-53-5	Diepoxybutane	C	313	1990
1563-38-8	7-Benzofuranol,2,3-dihydro-2,2-dimethyl-(carbofuran phenol)	C		
1563-66-2	Carbofuran	C	313	1992
1582-09-8	Benezeneamine, 2,6-dinitro-N,N-dipropyl-4-(trifluoromethyl)-	C	X	
1582-09-8	Trifluralin	C	313	
1615-80-1	Hydrazine, 1,2-diethyl-	C		
1634-02-2	Thioperoxydicarbonic diamid, tetrabutyl (tetrabutylthiuram disulfide)	C		
1634-04-4	Methyl tert-butyl ether	C	313	
1646-88-4	Propanal, 2-methyl-2-(methylsulfonyl)-,[(methylamino)carbonyl] oxime (Aldicarb sulfone)			
1649-08-7	1,2-Dichloro-1,1-difluoroethane		313	1995
1649-08-7	HCFC-132b		X	
1689-84-5	3,5-Dibromo-4-hydroxybenzonitrile		X	1995
1689-84-5	Bromoxynil		313	1995
1689-99-2	Bromoxynil octanoate		313	1995

CAS	NAME	C	313	ADD
1689-99-2	Octanoic acid, 2,6-dibromo-4-cyanophenyl ester		X	1995
1717-00-6	1,1-Dichloro-1-fluoroethane		313	
1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	C		1992
1762-95-4	Ammonium thiocyanate	C	*	1992
1836-75-5	Benzene, 2,4-dichloro-1-(4-nitrophenoxy)-		X	
1836-75-5	Nitrofen			313
1861-40-1	Benfluralin			313
1861-40-1	N-Butyl-N-ethyl-2,6-dinitro-4-(trifluoromethyl) benzenamine		X	1995
1863-63-4	Ammonium benzoate	C		1992
1888-71-7	Hexachloropropene	C		1992
1897-45-6	1,3-Benzenedicarbonitrile, 2,4,5,6-tetrachloro-		X	1990
1897-45-6	Chlorothalonil		313	1990
1910-42-5	Paraquat dichloride		313	1995
1912-24-9	6-Chloro-N-ethyl-N'-(1-methylethyl)-1,3,5-triazine-2,4-diamine		X	1995
1912-24-9	Atrazine		313	
1918-00-9	3,6-Dichloro-2-methoxybenzoic acid	C	X	1992
1918-00-9	Dicamba	C	313	1992
1918-16-7	2-Chloro-N-(1-methylethyl)-N-phenylacetamide		X	1995
1918-16-7	Propachlor		313	1995
1928-38-7	2,4-D Esters	C		1992
1928-43-4	2,4-D 2-ethylhexyl ester		313	1995
1928-47-8	2,4,5-T esters	C		1992
1928-61-6	2,4-D Esters	C		
1929-73-3	2,4-D butoxyethyl ester	C	313	
1929-73-3	2,4-D Esters	C	X	
1929-77-7	Carbamothioic acid, dipropyl-, S-propyl ester (vemolate)	C		
1929-82-4	2-Chloro-6-(trichloromethyl)pyridine		X	1995
1929-82-4	Nitrapyrin		313	1995
1937-37-7	C.I. Direct Black 38		313	1990

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CAS	NAME	C	313	ADD
1982-69-0	3,6-Dichloro-2-methoxybenzoic acid, sodium salt		X	1995
1982-69-0	Sodium dicamba		313	1995
2008-41-5	Carbamothioic acid, bis(2-methylpropyl)-, S-ethyl ester (butylate)	C		
2008-46-0	2,4,5-T amines	C		1992
2025-85-2	Selenium dioxide	C		1992
2032-65-7	Mercaptodimethur	C	X	
2032-65-7	Methiocarb	C	313	1992
2095-58-1	Borane, trifluoro-		X	1995
2095-58-1	Boron trifluoride		313	1995
2125-68-3	Phosphorous trichloride	C		1993
2125-68-3	Phosphorus trichloride	C		
2139-59-4	Potassium bromate		313	1995
2146-10-8	Sodium chromate	C	*	
2148-87-8	Hydrogen sulfide	C	313	
2151-06-8	Strontium chromate	C	*	
2151-16-3	Ammonium bichromate	C	*	
2155-70-6	Tributyltin methacrylate		313	1995
2164-07-0	7-Oxabicyclo(2.2.1)heptane-2,3-dicarboxylic acid, dipotassium salt		X	1995
2164-07-0	Dipotassium endothall		313	1995
2164-17-2	Fluometuron		313	1990
2164-17-2	Urea, N,N-dimethyl-N'-[3-(trifluoromethyl)phenyl]-		X	
2212-67-1	1H-Azepine-1 carbothioic acid, hexahydro-S-ethyl ester		X	1995
2212-67-1	Molinate		313	1995
2234-13-1	Octachloronaphthalene		313	1990
2300-66-5	Dimethylamine dicamba		313	1995
2303-16-4	Carbamothioic acid, bis(1-methylethyl)-S-(2,3-dichloro-2-propenyl)ester	C	X	
2303-16-4	Diallate	C	313	
2303-17-5	Triallate		313	

CAS	NAME	C	313	ADD
2312-35-8	Propargite	C	313	1992
2524-03-0	Dimethyl chlorothiophosphate		313	1995
2524-03-0	Dimethyl phosphorochloridothioate		X	1995
2545-59-7	2,4,5-T esters	C		1992
2556-36-7	1,4-Cyclohexane diisocyanate		313*	1995
2602-46-2	C.I. Direct Blue 6		313	1990
2631-37-0	Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate (promecarb)	C		
2655-15-4	2,3,5-Trimethylphenyl methylcarbamate		313	1995
2699-79-8	Sulfuryl fluoride		313	1995
2699-79-8	Vikane		X	
2702-72-9	2,4-D sodium salt		313	1995
2763-96-4	5-(Aminomethyl)-3-isoxazolol	C		1992
2763-96-4	Muscimol	C		1992
2764-72-9	Diquat	C		1992
2832-40-8	C.I. Disperse Yellow 3		313	1990
2837-89-0	2-Chloro-1,1,1,2-tetrafluoroethane		313	
2837-89-0	HCFC-124		X	
2921-88-2	Chlorpyrifos	C		1992
2944-67-4	Ferric ammonium oxalate	C		1992
2971-38-2	2,4-D chlorocrotyl ester	C		313
2971-38-2	2,4-D Esters	C	X	1992
3012-65-5	Ammonium citrate, dibasic	C		1992
3118-97-6	C.I. Solvent Orange 7		313	1990
3164-29-2	Ammonium tartrate	C		1992
3165-93-3	4-Chloro-o-toluidine, hydrochloride	C		
3173-72-6	1,5-Naphthalene diisocyanate		313*	1995
3251-23-8	Cupric nitrate	C	*	1992
3288-58-2	O,O-Diethyl S-methyl dithiophosphate	C		1992
3383-96-8	Temephos		313	
3486-35-9	Zinc carbonate		*	
3547-04-4	<b>DDE</b>	<b>C</b>		

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CAS	NAME	C	313	ADD
3547-04-4	<b>DDET</b>	<b>C</b>		
3653-48-3	(4-Chloro-2-methylphenoxy) acetate sodium salt		X	1995
3653-48-3	Methoxone sodium salt		313	1995
3689-24-5	Sulfotep	C		1992
3689-24-5	Tetraethyldithiopyrophosphate	C		1992
3697-24-3	5-Methylchrysene		313*	1995
3761-53-3	C.I. Food Red 5		313	1990
3813-14-7	2,4,5-T amines	C		
4080-31-3	1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride		313	1995
4098-71-9	Isophorone diisocyanate		313*	1995
4128-73-8	4,4'-Diisocyanatodiphenyl ether		313	1995
4170-30-3	2-Butenal	C	X	
4170-30-3	Crotonaldehyde	C	313	
4549-40-0	N-Nitrosomethylvinylamine	C	313	
4680-78-8	C.I. Acid Green 3		313	1990
5124-30-1	1,1'-Methylene bis(4-isocyanatocyclohexane)		313*	1995
5234-68-4	5,6-Dihydro-2-methyl-N-phenyl-1,4-oxathiin-3-carboxamide		X	1995
5234-68-4	Carboxin		313	1995
5344-82-1	Thiourea, (2-chlorophenyl)-	C	*	1992
5385-75-1	Dibenzo(a,e)fluoranthene		313*	1995
5522-43-0	1-Nitropyrene		313*	1995
5598-13-0	Chlorpyrifos methyl		313	1995
5598-13-0	O,O-Dimethyl-O-(3,5,6-trichloro-2-pyridyl)phosphorothioate		X	1995
5893-66-3	Cupric oxalate	C	*	
5902-51-2	5-Chloro-3-(1,1-dimethylethyl)-6-methyl-2,4(1H,3H)-pyrimidinedione		X	1995
5902-51-2	Terbacil		313	1995
5952-26-1	Ethanol,2,2-oxybis,dicarbamate (diethylene glycol,dicarbamate)	C		

CAS	NAME	C	313	ADD
5972-73-6	Ammonium oxalate	C		
6009-70-7	Ammonium oxalate	C		1992
6369-96-6	2,4,5-T amines	C		1992
6369-97-7	2,4,5-T amines	C		1992
6459-94-5	C.I. Acid Red 114		313	1995
6533-73-9	Thallium(I) carbonate	C	*	1992
6533-73-9	Thallos carbonate	C	*	
7005-72-3	4-Chlorophenyl phenyl ether	C	*	1992
7287-19-6	N,N'-Bis(1-methylethyl)-6-methylthio-1,3,5-triazine-2,4-diamine		X	1995
7287-19-6	Prometryn		313	
7421-93-4	Endrin aldehyde	C		1992
7428-48-0	Lead stearate	C	*	1992
7429-90-5	Aluminum (fume or dust)		313	1990
7439-92-1	Lead	C	313	1990
7439-96-5	Manganese		313	1990
7439-97-6	Mercury	C	313	1990
7440-02-0	Nickel	C	313	1990
7440-22-4	Silver – file to EPA ONLY		313	1990
7440-23-5	Sodium	C		1992
7440-28-0	Thallium	C	313	
7440-36-0	Antimony	C	313	
7440-38-2	Arsenic	C	313	1990
7440-39-3	Barium		313	1990
7440-41-7	Beryllium	C	313	1990
7440-43-9	Cadmium	C	313	1990
7440-47-3	Chromium	C	313	1990
7440-48-4	Cobalt		313	1990
7440-50-8	Copper – reportable to EPA ONLY		313	1990
7440-62-2	Vanadium (except when in alloy)		313	1990
7440-66-6	Zinc (fume or dust)	C	313	1990
7446-08-4	Selenium dioxide	C	*	

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7446-14-2	Lead sulfate	C		* 1992
7446-18-6	Thallium(I) sulfate	C		* 1992
7446-18-6	Thallous sulfate	C		* 1992
7446-27-7	Lead phosphate	C		* 1992
7447-39-4	Cupric chloride	C		* 1992
7488-56-4	Selenium sulfide	C		* 1992
7550-45-0	Titanium chloride (TiCl <sub>4</sub> ) (T-4)-	C	X	1990
7550-45-0	Titanium tetrachloride	C	313	1990
7558-79-4	Sodium phosphate, dibasic	C		1992
7601-54-9	Sodium phosphate, tribasic	C		1993
7631-89-2	Sodium arsenate	C		* 1993
7631-90-5	Sodium bisulfite	C		1993
7632-00-0	Sodium nitrite	C	313	1993
7645-25-2	Lead arsenate	C		* 1993
7646-85-7	Zinc chloride	C		* 1993
7647-01-0	Hydrochloric acid	C		1990
7647-01-0	Hydrogen chloride (anhydrous)	C	X	1990
7647-01-0	Hydrogen chloride (gas only)	C	X	1990
7647-18-9	Antimony pentachloride	C		* 1993
7664-38-2	Phosphoric acid	C	313	1990
7664-39-3	Hydrofluoric acid	C	X	
7664-39-3	Hydrofluoric acid (conc. 50% or greater)	C	X	
7664-39-3	Hydrogen fluoride	C	313	1990
7664-39-3	Hydrogen fluoride (anhydrous)	C	X	1990
7664-41-7	Ammonia	C	313	1990
7664-93-9	Sulfuric acid (aerosol)	C	313	1995
7681-49-4	Sodium fluoride	C		1993
7681-52-9	Sodium hypochlorite	C		1993
7696-12-0	2,2-Dimethyl-3-(2-methyl-1-propenyl)cyclopropanecarboxylic acid (1,3,4,5,6,7-hexahydro-1,3-dioxo-2H-isoindol-2-yl)methyl ester		X	1995
7696-12-0	Tetramethrin		313	1995

CAS	NAME	C	313	ADD
7697-37-2	Nitric acid	C	313	1990
7697-37-2	Nitric acid (conc 80% or greater)	C	X	1990
7699-45-8	Zinc bromide	C		* 1993
7705-08-0	Ferric chloride	C		1993
7718-54-9	Nickel chloride	C		* 1993
7719-12-2	<b>Phosphorous trichloride</b>	<b>C</b>		<b>1993</b>
7720-78-7	Ferrous sulfate	C		* 1993
7722-64-7	Potassium permanganate	C		* 1993
7723-14-0	Phosphorus	C		1993
7723-14-0	Phosphorus (yellow or white)	C	313	1990
7726-95-6	Bromine		313	1995
7733-02-0	Zinc sulfate	C		1993
7738-94-5	Chromic acid	C		* 1993
7758-01-2	<b>Potassium bromate</b>		<b>313</b>	<b>1995</b>
7758-29-4	Sodium phosphate, tribasic	C		1993
7758-94-3	Ferrous chloride	C		1993
7758-95-4	Lead chloride	C		* 1993
7758-98-7	Cupric sulfate	C		* 1993
7761-88-8	Silver nitrate	C		* 1993
7773-06-0	Ammonium sulfamate	C		1993
7778-39-4	Arsenic acid	C		* 1993
7778-44-1	Calcium arsenate	C		* 1993
7778-50-9	Potassium bichromate	C		* 1993
7778-54-3	Calcium hypochlorite	C		1993
7779-86-4	Zinc hydrosulfite	C		* 1993
7779-88-6	Zinc nitrate	C		* 1993
7782-41-4	Fluorine	C	313	1993
7782-49-2	Selenium	C	313	1990
7782-50-5	Chlorine	C	313	1990
7782-63-0	Ferrous sulfate	C		1993
7782-82-3	Sodium selenite	C		* 1993
7782-86-7	Mercurous nitrate	C		* 1993

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7783-00-8	Selenious acid	C		* 1993
7783-35-9	Mercuric sulfate	C		* 1993
7783-46-2	Lead fluoride	C		* 1993
7783-49-5	Zinc fluoride	C		* 1993
7783-50-8	Ferric fluoride	C		1993
7783-56-4	Antimony trifluoride	C		* 1993
7784-34-1	Arsenous trichloride	C		* 1993
7784-40-9	Lead arsenate	C		* 1993
7784-41-0	Potassium arsenate	C		* 1993
7784-46-5	Sodium arsenite	C		* 1993
7785-84-4	Sodium phosphate, tribasic	C		1993
7786-34-7	Mevinphos	C	313	1993
7786-81-4	Nickel sulfate	C		* 1993
7787-47-5	Beryllium chloride	C		* 1993
7787-49-7	Beryllium fluoride	C		* 1993
7787-55-5	Beryllium nitrate	C		* 1993
7788-98-9	Ammonium chromate	C		* 1993
7789-00-6	Potassium chromate	C		* 1993
7789-42-6	Cadmium bromide	C		* 1993
7789-43-7	Cobaltous bromide	C		* 1993
7789-61-9	Antimony tribromide	C		* 1993
7790-94-5	Chlorosulfonic acid	C		1993
7791-12-0	Thallium chloride TlCl	C		* 1993
7791-12-0	Thalious chloride	C		* 1993
7803-51-2	Phosphine	C	313	1993
7803-55-6	Ammonium vanadate	C		1993
8001-35-2	Camphechlor	C	X	
8001-35-2	Camphene, octachloro-	C	X	1990
8001-35-2	Toxaphene	C	313	1990
8001-58-9	Creosote	C	313	1990
8003-19-8	Dichloropropane - Dichloropropene (mixture)	C		1993
8003-34-7	Pyrethrins	C		1993

CAS	NAME	C	313	ADD
8014-95-7	Oleum (fuming sulfuric acid)	C		1993
8014-95-7	Sulfuric acid (fuming)	C		1993
8014-95-7	Sulfuric acid, mixture with sulfur trioxide	C		1993
9006-42-2	Metiram		313	1995
9016-87-9	Polymeric diphenylmethane diisocyanate		313*	1995
10022-70-5	Sodium hypochlorite	C		1993
10025-87-3	Phosphorus oxychloride	C		1993
10025-87-3	Phosphoryl chloride	C		1993
10025-91-9	Antimony trichloride	C		* 1993
10026-11-6	Zirconium tetrachloride	C		1993
10028-15-6	Ozone		313	1995
10028-22-5	Ferric sulfate	C		
10031-59-1	Thallium sulfate	C	*	
10034-93-2	Hydrazine sulfate		313	1990
10039-32-4	Sodium phosphate, dibasic	C		
10043-01-3	Aluminum sulfate	C		1993
10045-89-3	Ferrous ammonium sulfate	C		1993
10045-94-0	Mercuric nitrate	C		* 1993
10049-04-4	Chlorine dioxide		313	1990
10049-04-4	Chlorine oxide (ClO <sub>2</sub> )		X	1990
10049-05-5	Chromous chloride	C	*	
10061-02-6	trans-1,3-Dichloropropene		313	1995
10099-74-8	Lead nitrate	C		* 1993
10101-53-8	Chromic sulfate	C		* 1993
10101-63-0	Lead iodide	C		* 1993
10101-89-0	Sodium phosphate, tribasic	C		1993
10102-06-4	Uranyl nitrate	C		* 1993
10102-18-8	Sodium selenite	C		* 1993
10102-43-9	Nitric oxide	C		1993
10102-43-9	Nitrogen oxide (NO)	C		1993
10102-44-0	Nitrogen dioxide	C		1993
10102-45-1	Thallium(I) nitrate	C		* 1993

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The Massachusetts Toxics Use Reduction Act, Reportable Chemical List for Calendar Year 2003

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CAS	NAME	C	313	ADD
10102-48-4	Lead arsenate	C	*	1993
10108-64-2	Cadmium chloride	C	*	
10124-50-2	Potassium arsenite	C	*	1993
10124-56-8	Sodium phosphate, tribasic	C		1993
10140-65-5	Sodium phosphate, dibasic	C		1993
10192-30-0	Ammonium bisulfite	C		1993
10196-04-0	Ammonium sulfite	C		
10222-01-2	2,2-Dibromo-3-nitrilopropionamide		313	1995
10294-34-5	Borane, trichloro-		X	1995
10294-34-5	Boron trichloride		313	1995
10347-54-3	1,4-Bis(methylisocyanate)cyclohexane		313*	1995
10361-89-4	Sodium phosphate, tribasic	C		1993
10380-29-7	Cupric sulfate, ammoniated	C	*	
10415-75-5	Mercurous nitrate	C	*	
10421-48-4	Ferric nitrate	C	*	
10453-86-8	5-(Phenylmethyl)-3-furanyl)methyl 2,2-dimethyl-3-(2-methyl-1-propenyl)cyclopropanecarboxylate		X	1995
10453-86-8	Resmethrin		313	1995
10544-72-6	Nitrogen dioxide	C		
10588-01-9	Sodium bichromate	C	*	
10605-21-7	Carbamic acid, 1H-benzimidazol-2-yl,methyl ester (carbendazim)	C		
11096-82-5	Aroclor 1260	C		
11097-69-1	Aroclor 1254	C		1993
11104-28-2	Aroclor 1221	C		1993
11115-74-5	Chromic acid	C	*	
11141-16-5	Aroclor 1232	C		1993
12002-03-8	Cupric acetoarsenite	C		1993
12002-03-8	Paris green	C		1993
12039-52-0	Selenious acid, dithallium(1+) salt	C	*	1993
12054-48-7	Nickel hydroxide	C	*	1993
12122-67-7	Carbamodithioic acid, 1,2-ethanediylbis-, zinc complex	X		1990

CAS	NAME	C	313	ADD
12122-67-7	Zineb		313	1990
12125-01-8	Ammonium fluoride	C		1993
12125-02-9	Ammonium chloride	C		1993
12135-76-1	Ammonium sulfide	C		1993
12427-38-2	Carbamodithioic acid, 1,2-ethanediylbis-, manganese complex		X	
12427-38-2	Maneb		313	1990
12672-29-6	Aroclor 1248	C		
12674-11-2	Aroclor 1016	C		1993
12771-08-3	Sulfur monochloride	C		1993
13194-48-4	Ethoprop		313	1995
13194-48-4	Ethoprophos		X	1995
13194-48-4	Phosphorodithioic acid O-ethyl S,S-dipropyl ester		X	1995
13356-08-6	Fenbutatin oxide		313	1995
13356-08-6	Hexakis(2-methyl-2-phenylpropyl)distannoxane		X	1995
13463-39-3	Nickel carbonyl	C	*	1993
13463-40-6	Iron carbonyl (Fe(CO) <sub>5</sub> ), (TB-5-11)-		X	
13463-40-6	Iron, pentacarbonyl-		313	1995
13474-88-9	1,1-Dichloro-1,2,2,3,3-pentafluoropropane		313	1995
13474-88-9	HCFC-225cc		X	
13560-99-1	2,4,5-T salts	C		1993
13597-99-4	Beryllium nitrate	C	*	1993
13684-56-5	Desmedipham		313	1995
13746-89-9	Zirconium nitrate	C	*	1993
13765-19-0	Calcium chromate	C	*	1993
13814-96-5	Lead fluoborate	C	*	
13826-83-0	Ammonium fluoborate	C		1993
13952-84-6	sec-Butylamine	C		1993
14017-41-5	Cobaltous sulfamate	C	*	1993
14216-75-2	Nickel nitrate	C	*	
14258-49-2	Ammonium oxalate	C		1993
14307-35-8	Lithium chromate	C	*	

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The Massachusetts Toxics Use Reduction Act, Reportable Chemical List for Calendar Year 2003

Sorted Numerically by CAS

CAS	NAME	C	313	ADD
14307-43-8	Ammonium tartrate	C		1993
14324-55-1	Zinc, bis(diethylcarbamodithioato-S,S)-(ethyl ziram)	C	*	
14484-64-1	Ferbam			313
14484-64-1	Tris(dimethylcarbamodithioato-S,S')iron		X	1995
14639-97-5	Zinc ammonium chloride	C	*	1993
14639-98-6	Zinc ammonium chloride	C	*	1993
14644-61-2	Zirconium sulfate	C		1993
15339-36-3	Manganese, bis(dimethylcarbamodithioato-S,S)-(manganesedimethyldithiocarbamate)	C	*	
15646-96-5	2,4,4-Trimethylhexamethylene diisocyanate		313*	1995
15699-18-0	Nickel ammonium sulfate	C	*	1993
15739-80-7	Lead sulfate	C	*	1993
15950-66-0	2,3,4-Trichlorophenol	C	*	
15972-60-8	Alachlor			313
16071-86-6	C.I. Direct Brown 95		313	1990
16543-55-8	N-Nitrosornicotine		313	1990
16721-80-5	Sodium hydrosulfide	C		1993
16752-77-5	Ethanimidothioic acid, N-[[methylamino]carbonyl]	C		
16752-77-5	Methomyl	C		
16871-71-9	Zinc silicofluoride	C	*	
16919-19-0	Ammonium silicofluoride	C		1993
16923-95-8	Zirconium potassium fluoride	C		1993
16938-22-0	2,2,4-Trimethylhexamethylene diisocyanate		313*	1995
17702-57-7	Methanimidamide, N,N-dimethyl-N-[2-methyl-4-[[[(methylamino)carbonyl]oxy]phenol]- (Formparanate)	C		
17804-35-2	Benomyl			313 1995
18883-66-4	D-Glucose, 2-deoxy-2-[[[(methylnitrosoamino)-carbo	C		1993
19044-88-3	4-(Dipropylamino)-3,5-dinitrobenzenesulfonamide		X	1995
19044-88-3	Oryzalin		313	1995

CAS	NAME	C	313	ADD
19666-30-9	3-(2,4-Dichloro-5-(1-methylethoxy)phenyl)-5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2(3H)-one		X	1995
19666-30-9	Oxydiazon			313 1995
20325-40-0	3,3'-Dimethoxybenzidine dihydrochloride			313 1995
20325-40-0	o-Dianisidine dihydrochloride		X	1995
20354-26-1	2-(3,4-Dichlorophenyl)-4-methyl-1,2,4-oxadiazolidine-3,5-dione		X	1995
20354-26-1	Methazole			313 1995
20816-12-0	Osmium oxide OsO <sub>4</sub> (T-4)-	C	X	1990
20816-12-0	Osmium tetroxide	C		313 1990
20830-81-3	Daunomycin	C		
20859-73-8	Aluminum phosphide	C		313 1993
21087-64-9	Metribuzin			313 1995
21725-46-2	Cyanazine			313 1995
22781-23-3	2,2-Dimethyl-1,3-benzodioxol-4-ol methylcarbamate		X	1995
22781-23-3	Bendiocarb			313 1995
22961-82-6	1,3-Benzodioxol-4-ol,2,2-dimethyl-, (bendiocarbphenol)	C		
23135-22-0	Ethanimidothioic acid, 2-(dimethylamino)-N-[[[(methylamino)carbonyl]oxy]-2-oxo-, methyl ester (oxamyl)	C		
23422-53-9	Methanimidamide, N,N-dimethyl-N-[3-[[[(methylamino)carbonyl]oxylphenyl]-,monohydrochloride (formetanate hydrochloride)	C		
23564-05-8	Thiophanate-methyl			313 1995
23564-06-9	(1,2-Phenylenebis(iminocarbonothioyl)) biscarbamic acid diethyl ester		X	1995
23564-06-9	Thiophanate ethyl			313 1995
23950-58-5	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl	C	X	1993
23950-58-5	Pronamide	C		313
25154-54-5	Dinitrobenzene (mixed isomers)	C		
25154-55-6	Nitrophenol (mixed isomers)	C		1993

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CAS	NAME	C	313	ADD
25155-30-0	Sodium dodecylbenzenesulfonate	C		1993
25167-82-2	Trichlorophenol	C	*	
25168-15-4	2,4,5-T esters	C		
25168-26-7	2,4-D Esters	C		
25311-71-1	2-((Ethoxyl((1-methylethyl)amino]phosphinothioyl]oxy) benzoic acid 1-methylethyl ester	X		1995
25311-71-1	Isofenphos		313	1995
25321-14-6	Dinitrotoluene (mixed isomers)	C	313	
25321-22-6	Dichlorobenzene	C	X	
25321-22-6	Dichlorobenzene (mixed isomers)	C	313	
25376-45-8	Diaminotoluene (mixed isomers)	C	313	1990
25376-45-8	Toluenediamine	C	X	1990
25550-58-7	Dinitrophenol	C		1993
26002-80-2	2,2-Dimethyl-3-(2-methyl-1-propenyl)cyclopropanecarboxylic acid (3-phenoxyphenyl)methyl ester	X		1995
26002-80-2	Phenothrin			313
26264-06-2	Calcium dodecylbenzenesulfonate	C		
26419-73-8	1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-,O- [(methylamino)carbonyl]oxime (tripate)	C		
26471-62-5	Benzene, 1,3-diisocyanatomethyl-	C	X	1990
26471-62-5	Toluene diisocyanate (unspecified isomer)	C	X	
26471-62-5	Toluenediisocyanate (mixed isomers)	C	313	
26628-22-8	Sodium azide (Na(N3))	C	313	
26638-19-7	Dichloropropane	C		
26644-46-2	N,N'-(1,4-Piperazinediylbis(2,2,2-trichloroethylidene)) bisformamide	X		1995
26644-46-2	Triforine		313	
26952-23-8	Dichloropropene	C		
27176-87-0	Dodecylbenzenesulfonic acid	C		
27314-13-2	4-Chloro-5-(methylamino)-2-[3-(trifluoromethyl)phenyl]-3(2H)-pyridazinone	X		1995
27314-13-2	Norflurazon		313	1995

CAS	NAME	C	313	ADD
27323-41-7	Triethanolamine dodecylbenzene sulfonate	C		1993
27774-13-6	Vanadyl sulfate	C		1993
28057-48-9	d-trans-Allethrin		313	1995
28057-48-9	d-trans-Chrysanthemic acid of d-allethrine	X		1995
28249-77-6	Carbamic acid, diethylthio-, S-(p-chlorobenzyl)	X		1995
28249-77-6	Thiobencarb		313	1995
28300-74-5	Antimony potassium tartrate	C	*	1993
28407-37-6	C.I. Direct Blue 218		313	1995
29082-74-4	Octachlorostyrene		313	
29232-93-7	O-(2-(Diethylamino)-6-methyl-4-pyrimidinyl)-O,O-dimethyl phosphorothioate	X		1995
29232-93-7	Pirimiphos methyl		313	1995
30525-89-4	Paraformaldehyde	C		
30558-43-1	Ethanimidothioci acid, 2-(dimethylamino-n-hydroxy-2-oxo-, methyl ester (A2213)	C		
30560-19-1	Acephate		313	1995
30560-19-1	Acetylphosphoramidothioic acid O,S-dimethyl ester	X		1995
31218-83-4	3-((Ethylamino)methoxyphosphinothioyl)oxy)-2-butenic acid, 1-methylethyl ester	X		1995
31218-83-4	Propetamphos		313	1995
32534-95-5	2,4,5-TP esters	C		
33089-61-1	Amitraz		313	
33213-65-9	beta - Endosulfan	C		
34014-18-1	N-(5-(1,1-Dimethylethyl)-1,3,4-thiadiazol-2-yl)-N,N'-dimethylurea	X		1995
34014-18-1	Tebuthiuron		313	1995
34077-87-7	Dichlorotrifluoroethane		313	
35367-38-5	Diflubenzuron		313	1995
35400-43-2	O-Ethyl O-(4-(methylthio)phenyl)phosphorodithioic acid S-propyl ester	X		1995
35400-43-2	Sulprofos		313	
35554-44-0	1-(2-(2,4-Dichlorophenyl)-2-(2-propenyloxy)ethyl)-1H-imidazole	X		1995

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35554-44-0	Imazalil			313
35691-65-7	1-Bromo-1-(bromomethyl)-1,3-propanedicarbonitrile		313	1995
36478-76-9	Uranyl nitrate	C	*	
37211-05-5	Nickel chloride	C		* 1993
38661-72-2	1,3-Bis(methylisocyanate)cyclohexane		313*	1995
38727-55-8	Diethyl ethyl		313	1995
39156-41-7	2,4-Diaminoanisole sulfate		313	1990
39196-18-4	Thiofanox	C		1993
39300-45-3	Dinocap		313	
39515-41-8	2,2,3,3-Tetramethylcyclopropane carboxylic acid cyano(3-phenoxyphenyl)methyl ester		X	1995
39515-41-8	Fenprothrin		313	1995
40487-42-1	N-(1-Ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine		X	1995
40487-42-1	Pendimethalin		313	1995
41198-08-7	O-(4-Bromo-2-chlorophenyl)-O-ethyl-S-propylphosphorothioate		X	1995
41198-08-7	Profenofos		313	1995
41766-75-0	3,3'-Dimethylbenzidine dihydrofluoride		313	1995
41766-75-0	o-Tolidine dihydrofluoride		X	1995
42504-46-1	Isopropanolamine dodecylbenzene sulfonate	C		1993
42874-03-3	Oxyfluorfen		313	1995
43121-43-3	1-(4-Chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-2-butanone		X	1995
43121-43-3	Triadimefon		313	1995
50471-44-8	3-(3,5-Dichlorophenyl)-5-ethenyl-5-methyl-2,4-oxazolidinedione		X	1995
50471-44-8	Vinclozolin		313	1995
51026-28-9	Carbamodithioic acid, (hydroxymethyl)methyl-,monopotassium salt (potassium n-hydroxymethyl-n-methyldithiocarbamate)	C		
51235-04-2	Hexazinone		313	1995
51338-27-3	2-(4-(2,4-Dichlorophenoxy)phenoxy)propanoic acid, methyl ester		X	1995

CAS	NAME	C	313	ADD
51338-27-3	Diclofop methyl		313	1995
51630-58-1	4-Chloro-alpha-(1-methylethyl)benzeneacetic acid cyano(3-phenoxyphenyl)methyl ester		X	1995
51630-58-1	Fenvalerate		313	1995
52628-25-8	Zinc ammonium chloride	C	*	
52645-53-1	3-(2,2-Dichloroethenyl)-2,2-dimethylcyclopropane carboxylic acid, (3-phenoxy-phenyl)methyl ester		X	1995
52645-53-1	Permethrin			313
52652-59-2	Lead stearate	C	*	
52740-16-6	Calcium arsenite	C	*	
52888-80-9	Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester (prosulfocarb)	C		
52888-80-9	Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester (prosulfocarb)	C		
53404-19-6	2,4-(1H,3H)-Pyrimidinedione, 5-bromo-6-methyl-3-(1-methylpropyl), lithium salt		X	1995
53404-19-6	Bromacil, lithium salt		313	1995
53404-37-8	2,4-D 2-ethyl-4-methylpentyl ester		313	1995
53404-60-7	Dazomet, sodium salt		313	1995
53404-60-7	Tetrahydro-3,5-dimethyl-2H-1,3,5-thiadiazine-2-thione, ion(1-), sodium		X	1995
53467-11-1	2,4-D Esters	C		1993
53469-21-9	Aroclor 1242	C		1993
55285-14-8	Carbamic acid, [(dibutylamino)thio]methyl-,2,3-dihydro-2,2-dimethyl-7-benzofuranyl ester(carbosulfan)	C		
55290-64-7	2,3,-Dihydro-5,6-dimethyl-1,4-dithiin 1,1,4,4-tetraoxide		X	1995
55290-64-7	Dimethipin			313
55406-53-6	3-Iodo-2-propynyl butylcarbamate		313	1995
55488-87-4	Ferric ammonium oxalate	C		
56189-09-4	Lead stearate	C	*	
57213-69-1	Triclopyr triethylammonium salt		313	1995
59669-26-0	Thiodicarb			313

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60168-88-9	.alpha.-(2-Chlorophenyl)-.alpha.-4-chlorophenyl)-5-pyrimidinemethanol		X	1995
60168-88-9	Fenarimol			313
60207-90-1	1-(2-(2,4-Dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl)-methyl-1H-1,2,4,-triazole		X	1995
60207-90-1	Propiconazole			313 1995
61792-07-2	2,4,5-T esters	C		
62476-59-9	5-(2-Chloro-4-(trifluoromethyl)phenoxy)-2-nitrobenzoic acid, sodium salt		X	1995
62476-59-9	Acifluorfen, sodium salt			313 1995
63938-10-3	Chlorotetrafluoroethane			313
64902-72-3	2-Chloro-N-(((4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl)benzenesulfonamide		X	1995
64902-72-3	Chlorsulfuron			313 1995
64969-34-2	3,3'-Dichlorobenzidine sulfate			313 1995
66441-23-4	2-(4-((6-Chloro-2-benzoxazolylen)oxy)phenoxy)propanoic acid, ethyl ester		X	1995
66441-23-4	Fenoxaprop ethyl			313 1995
67485-29-4	Hydramethylnon			313 1995
67485-29-4	Tetrahydro-5,5-dimethyl-2(1H)-pyrimidinone(3-(4-(trifluoromethyl)phenyl)-1-(2-(4-(trifluoromethyl)phenyl)ethenyl)-2-propenylidene)hydrazone		X	1995
68085-85-8	3-(2-Chloro-3,3,3-trifluoro-1-propenyl)-2,2-Dimethylcyclopropanecarboxylic acid cyano(3-phenoxyphenyl) methyl ester		X	1995
68085-85-8	Cyhalothrin			313 1995
68359-37-5	3-(2,2-Dichloroethenyl)-2,2-dimethylcyclopropanecarboxylic acid, cyano(4-fluoro-3-phenoxyphenyl)methyl ester		X	
68359-37-5	Cyfluthrin			313
69409-94-5	Fluvalinate			313
69409-94-5	N-(2-Chloro-4-(trifluoromethyl)phenyl)-DL-valine(+)-		X	1995

CAS	NAME	C	313	ADD
	cyano(3-phenoxyphenyl)methyl ester			
69806-50-4	2-(4-(5-(Trifluoromethyl)-2-pyridinyl[oxy]-phenoxy)propanoic acid, butyl ester		X	1995
69806-50-4	Fluazifop butyl			313 1995
71751-41-2	Abamectin			313
71751-41-2	Avermectin B1		X	1995
72178-02-0	5-(2-Chloro-4-(trifluoromethyl)phenoxy)-N-methylsulfonyl)-2-nitrobenzamide		X	1995
72178-02-0	Fomesafen			313 1995
72490-01-8	(2-(4-Phenoxy-phenoxy)-ethyl)carbamic acid ethyl ester		X	1995
72490-01-8	Fenoxycarb			313 1995
74051-80-2	2-(1-(Ethoxyimino) butyl)-5-(2-(ethylthio)propyl)-3-hydroxyl-2-cyclohexen-1-one		X	1995
74051-80-2	Sethoxydim			313 1995
75790-84-0	4-Methyldiphenylmethane-3,4-diisocyanate			313* 1995
75790-87-3	2,4'-Diisocyanatodiphenyl sulfide			313* 1995
76578-14-8	2-(4-((6-Chloro-2-quinoxalinyloxy]phenoxy) propanoic acid ethyl ester		X	1995
76578-14-8	Quizalofop-ethyl			313 1995
77501-63-4	5-(2-Chloro-4-(trifluoromethyl)phenoxy)-2-nitro-2-ethoxy-1-methyl-2-oxoethyl ester		X	1995
77501-63-4	Lactofen			313 1995
82657-04-3	Bifenthrin			313 1995
88671-89-0	.alpha.-Butyl-.alpha.-(4-chlorophenyl)-1H-1,2,4-triazole-1-propanenitrile		X	1995
88671-89-0	Myclobutanil			313 1995
90454-18-5	Dichloro-1,1,2-trifluoroethane			313
90982-32-4	Chlorimuron ethyl			313 1995
90982-32-4	Ethyl-2-(((4-chloro-6-methoxyprimidin-2-yl)-carbonyl)-amino]sulfonyl)benzoate		X	1995
101200-48-0	2-(4-Methoxy-6-methyl-1,3,5-triazin-2-yl)-methylamino]carbonyl)amino)sulfonyl)-, methyl ester		X	1995

CAS: Chemical Abstract Service Registry Number

313: EPCRA 313 Reportable Chemical, X: EPCRA 313 Synonym, \* : member of a chemical category – should not be reported as an individual chemical.

C: CERCLA Chemical – **If a chemical is noted as ONLY a CERCLA chemical, then a STATE ONLY Form R as well as a Form S must be completed and submitted to DEP with your toxics use report.**

**NOTE:** Some EPA Chemicals may have been delisted from the EPCRA 313 list, but the chemical **MAY STILL** be listed as a CERCLA chemical.

The Massachusetts Toxics Use Reduction Act, Reportable Chemical List for Calendar Year 2003

Sorted Numerically by CAS

CAS	NAME	C	313	ADD
101200-48-0	Tribenuron methyl		313	1995
111512-56-2	1,1-Dichloro-1,2,3,3,3-pentafluoropropane		313	1995
111512-56-2	HCFC-225eb	X		1995
111984-09-9	3,3'-Dimethoxybenzidine hydrochloride		313	1995
111984-09-9	o-Dianisidine hydrochloride	X		1995
127564-92-5	Dichloropentafluoropropane		313	1995

CAS	NAME	C	313	ADD
128903-21-9	HCFC-225aa		X	1995
134190-37-7	Diethyldiisocyanatobenzene		313*	1995
136013-79-1	1,3-Dichloro-1,1,2,3,3-pentafluoropropane		313	1995
136013-79-1	HCFC-225ea	X		1995

CAS: Chemical Abstract Service Registry Number

313: EPCRA 313 Reportable Chemical, X: EPCRA 313 Synonym,\* : member of a chemical category – should not be reported as an individual chemical.

C: CERCLA Chemical – **If a chemical is noted as ONLY a CERCLA chemical, then a STATE ONLY Form R as well as a Form S must be completed and submitted to DEP with your toxics use report.**

**NOTE:** Some EPA Chemicals may have been delisted from the EPCRA 313 list, but the chemical ***MAY STILL*** be listed as a CERCLA chemical.

## **Appendix C**

### **RECALCULATING BRIs AND ERIs WHEN PRODUCTION UNITS OR UNITS OF PRODUCT HAVE BEEN REDEFINED**

If you make a change in your unit of product or how you define your production units, you will need to revise your Byproduct Reduction Index (BRI) and your Emissions Reduction Index (ERI). The key question is: Did your facility implement any toxics use reduction (TUR) efforts between the base year and the year of the change? If not, you are not required to re-calculate the BRI and the ERI for previous years. You can assume that the amount of byproduct per unit of product for this year was the same as in the base year. Measure progress against that number from now on. (The same is true of the ERI.)

If your facility did implement TUR, you need to adjust your byproducts per unit of product and your emissions per unit of product numbers from the base year. If you have sufficient information to recalculate those numbers, you should do so. If you do not have sufficient information, you should use an estimate.

The following is one way to do this estimate. First, estimate what this year's byproduct from the production unit would have been if you had not implemented TUR. Then divide that number by this year's number of products. Do the same for emissions.

The result is a byproduct per unit of product amount (and an emissions per unit of product amount) that you can assume holds true for the base year. You should measure progress against that amount from now on. If you have any questions, contact DEP at (617) 292-5982.

When you submit your toxics use report, you should note that you have recalculated your BRIs and ERIs in a cover letter or on the Form S. Keep the documentation of the change in your records.



## **Appendix D**

### **GENERAL REPORTING ERRORS**

#### **1. The contents of a toxics use report submitted to DEP is not complete.**

A complete toxics use report includes the following:

- ✓ Form S Cover Sheet
- ✓ Form R (or Form A, however Form As are not permitted for PBTs) for each chemical
- ✓ Form S for each chemical
- ✓ Fee worksheet
- ✓ TURA Billing Information Form
- ✓ TURA 2003 Reporting Checklist

Incomplete TURA reporting may result in late fees, enforcement and fines.

**Each facility must file one Form S cover sheet for the facility as a whole. For each chemical reported, a Form R and Form S must be completed.** For ease of review, please place the Form R on top of the Form S for each chemical reported

### **COMMON REPORTING ERRORS**

#### **1. Total chemical use as reported in Sections 1 c, d, and e of the Form S is not equal to the sum of the amounts generated as byproduct (Section 1 f) and shipped in product (Section 1 g).**

Section of the report that may need correcting: FORM S: Section 1: Facility-wide Use of Chemical

Generally, there is a materials balance between chemical inputs and outputs on a facility-wide basis:

manufactured + processed + otherwise used = byproduct + shipped in product

If this is not the case on all of your forms, you should have checked one of the explanations (i.e., chemical was recycled on-site) in Section 2 on the Form. Otherwise, your materials accounting for the chemical may need to be checked.

#### **2. The Byproduct Reduction Index and/or the Emissions Reduction Index reported on the Form S is significantly less than 0 or greater than 100.**

Sections of the report that may need correcting: FORM S: Section 4, item d. (Byproduct Reduction Index) and/or item e. (Emissions Reduction Index) (Please refer to page 23 and 24 of the reporting instructions.)

There may be an error in calculating either the BRI or the ERI if they are significantly less than 0 or greater than 100. A BRI and/or ERI significantly below 0 indicates either a large increase in byproduct generation and/or emissions, or that the calculation of the BRI and ERI is incorrect. In the latter case, you will need to check your BRI and ERI calculations (e.g., the unit of product and/or production unit may not be designated properly).

The BRI or ERI cannot be greater than 100, since this value represents the total elimination of the chemical. If your BRI and ERI is greater than 100, you will need to recheck your calculations for errors.

#### **3. The Byproduct Reduction Index and the Emissions Reduction Index are not equal.**

Sections of the report that may need correcting: FORM S: Section 4, item d. (Byproduct Reduction Index) and/or item e. (Emissions Reduction Index).

Your report may indicate that the BRI does not equal the ERI. These two numbers should be equal unless you are doing destructive treatment (see Section 7 of the Form R), on-site recycling, or waste was not shipped off-site. (Please refer to page 26 of the reporting instructions.)

**4. The amount reported as byproduct on the Form S is *less than* the quantities reported in Section 8 (Source Reduction and Recycling Activities) of the Form R.**

Sections of the report that may need correcting: FORM S: Section 1, item f: Facility-Wide byproduct generated and/or FORM R: Sections 5 and 6.

Byproduct will usually be equal to, or exceed, transfers and releases, since byproduct is the total quantity of waste that is generated during the production process calculated **before** it has been treated. The only time byproduct is less than transfers and releases is when some byproduct is reported as product on the Form S. (Please refer to pages 18-20 of the instructions.)

**5. The amount reported as byproduct on the Form S is *greater than* the quantities reported in Section 8 (Source Reduction and Recycling Activities) of the Form R when there is no on-site energy recovery, recycling, or destructive treatment.**

Sections of the report that may need correcting: FORM S: Sections 1 item f: Facility-Wide byproduct generated, Section 2: Optional Questions and/or FORM R: Section 7.

Byproduct is the total quantity of waste that is generated during the production process, calculated **before** it has been treated. If a treatment system destroys some or all of the byproducts, or some of the byproducts are recycled, the reported byproducts will be greater than releases and transfers off-site. If there is no destructive treatment (including energy recovery), on-site recycling, or byproduct reported as product, then total byproduct on the Form S will be equal to Section 8 of the Form R. (Please refer to pages 18-20 of the instructions.)

**6. The current reporting year (2003) is incorrectly entered as the base year.**

Section of the report that may need correcting: Form S Section 4, item b. Base Year.

The reporting year of 2003 should only be entered as a base year if the production unit is NEW for 2003 or if you are a new filer for 2003.

## **Form S Cover Sheet –Common Reporting Error**

**1. The production unit has been renumbered.**

Section of the report that needs to be corrected: FORM S Cover Sheet - Section 4, item a.

While you may add new production unit numbers or change the wording describing a production unit, production unit numbers, once assigned, must not be changed, since this directly affects your BRIs and ERIs. (Please refer to page 14 of the instructions).


## **Appendix E**

### **QUESTIONS and ANSWERS**

#### **GENERAL REPORTING QUESTIONS**

##### **1. What happens if we reported last year but are exempt this year?**

If your facility does not have to report this year but reported in a previous year, DEP recommends that you notify DEP in writing and explain why. This will help DEP distinguish facilities that are exempt from those that are out of compliance.

 **Note:** The toxics use report cover sheet has an optional section that you may complete if your facility is newly exempt from reporting (see p. 11 of this guidance). You also may send a letter to DEP.

##### **2. A company redefines a unit of product and/or a production unit. This results in the need to recalculate BRIs and ERIs, which in turn requires the recalculation of base year information. What should the company do if the data for the base year is insufficient or missing?**

If the data for your current base year is either insufficient or missing, you may change your base year to be the earliest year in which you consider your data to be sufficient to provide a meaningful BRI and ERI. You would not be required to change intermediate years.

##### **3. Should the plan update summary be submitted this year?**

**YES.** Plan updates are due in even-numbered calendar years. Your plan update is due July 1, 2004.

##### **4. How would I file a trade secret claim this year?**

If you are making a trade secret claim in your 2003 reporting package, please call DEP's TURA Program at (617) 292-5582 to request the "Trade Secret Special Instructions". (See p. 10 of the reporting package.)

#### **WASTE TREATMENT CHEMICALS**

##### **1. If I claim my whole facility as a production unit, can I include my waste treatment system as part of my production unit?**

No. Waste treatment units are not considered manufacturing processes and therefore can not be included in production units. Companies should track chemicals used in waste treatment units separately from those used in production units. Companies can report chemical use associated with waste treatment operations in Section 3 of the Form S, Chemicals Used in Waste Treatment Units.

##### **2. What if my waste treatment unit is "hard-piped" or "integral" to my production process, can I then consider it part of my production unit?**

No. Waste treatment units are not considered production processes even if they are "integral" to the manufacturing process. Chemicals used in them are reported separately from production units.

**3. If I previously reported my waste treatment unit as part of my production unit, what should I do to correct my reporting?**

First, you should consider all waste streams previously treated by your waste treatment unit as byproducts from production units in your facility. These byproducts should be allocated back to the production unit where they were generated. Byproducts should then be included in the BRI calculation for the specific production unit in which they were generated.

Chemicals used to perform the waste treatment operations (for example, acids and bases used for pH adjustment) can be reported separately in Section 3 of the Form S. You should continue to use the same production unit and production unit number for the purposes of calculating your BRI. Amounts of byproduct previously not reported should be added to the amounts used to calculate the BRI and ERI for your base year. You would not be required to change intermediate years.

**4. My base year was 1997. How do I correctly calculate my byproduct per unit of product for 1990 given that I did not previously include the byproducts in my base year calculation?**

Estimate the quantity of byproducts treated in your waste treatment unit and add them into your original calculation of byproduct per unit of product.

**5. When I dump my spent acid process bath, I use it in my waste treatment, as is, without further treatment. Can I report this as byproduct as product?**

No. Byproduct as product that is used on site must be used in a manufacturing process to be considered byproduct as product. Amounts of spent acid and base baths that are used to adjust pH in waste treatment operations can be used to reduce facility-wide use of the reportable chemicals. They are still considered byproducts when they leave the production unit.

**TUR PLANNER CERTIFICATION**

**1. How do I receive an application for certification or recertification as a TUR Planner?**

Please call (617) 556-1011 and ask for a "Planner Certification Package" or "Planner Recertification Package," depending upon your situation. You can also download the Package from DEP's web site at [www.mass.gov/dep/bwp/dhm/tura/turapubs.htm](http://www.mass.gov/dep/bwp/dhm/tura/turapubs.htm).

**2. Once I receive the TUR Planner application package, if I have questions concerning filling it out, can someone assist me?**

Yes. Please call the DEP Planner Certification Program at (617) 556-1011.

**3. Can a planner receive credit for applicable courses taken outside the TURI and OTA curriculum?**

Yes, as long as the courses fit the regulatory requirements found in the TUR Planner Guidance Document and in 310 CMR 50.58. Courses offered by either OTA or TURI are usually prior-approved by DEP for use by TUR Planners seeking recertification credit. However, Planners do not receive credit by simply attending the pre-approved course; they must apply to DEP to actually receive the credit via the "Pre-approval Credit Form" attached to all recertification applications or as part of their completed recertification application.

Any other organization wishing to offer a course(s) pre-approved for credit for TUR Planners for credit may contact the DEP Planner Program at (617) 556-1011 for more information. DEP normally requests some tangible information (e.g., a syllabus, course description and length of time) prior to pre-approving a course for Planner credit. Once again, each Planner attending a pre-approved course and seminar must apply to DEP in order to receive the credit. Call the DEP Planner Certification Program at (617) 556-1011 or download the list of approved courses from the DEP TURA web site.

**4. How do I find out what courses TURI is offering or planning to offer which are suitable for credit toward recertification?**

The contact person for TURI continuing education is Todd MacFadden. He may be reached at (978) 934-3391.

**5. Once I take a course certified by DEP for to TUR Planner credit, do I still need to apply to DEP for credit?**

Yes. DEP may give a course instructor permission to state that his or her course has been approved by DEP for use by TUR Planners for recertification credit. However, in order to receive the credit you must apply to DEP. You may wait until you have all the required credits or you may use the "Pre-approval Credit Form" included in the application package to receive credit immediately.

**6. Is there a rollover of recertification credits into the next 2-year period allowed for those TUR Planners who have accumulated more than the required credits in any given certification and recertification period?**

Generally no, since allowing a rollover of extra credits into the next recertification period would defeat the basic purpose of recertification, which is to keep TUR Planners up-to-date on current TUR planning techniques. However, exceptions may be made in certain situations. For example, an exception could be made for obtaining extra credits by taking a relevant TUR course during the end of a TUR Planner's certification or recertification period. In this case, some of the surplus credits could possibly be used toward the next recertification period.

**7. When are TUR Planner examinations held?**

There are no set dates for TUR Planner examinations. DEP generally offers the examination once each year during the spring (usually in May), after TURI's last refresher planner course of the year. All eligible TUR Planners are notified by mail. Everyone who has taken the TURI planner course since the last planner examination is notified by DEP of the upcoming examination. In addition, all examinees who have failed the examination in the past are notified by DEP. TURI also announces the pending examination in its planner classes.

**8. Can I receive an application for certification or recertification as a TUR Planner via the World Wide Web?**

TUR Planners may obtain DEP TURA Planner certification material by accessing the permit area of the TURA Web site at: <http://www.mass.gov/dep>

**9. Is there a professional organization for TUR Planners?**

Yes. The Toxics Use Reduction Planning Association (TURPA) was formed in 1994. About three quarters of the members are from manufacturing facilities, some are consultants, and some belong to state agencies. For more information about TURPA, contact TURPA at 1-888-go-TURPA (1-888-468-8772) or visit their web sit at: <http://www.turpa.org>.

## **Appendix F**

### **GUIDANCE DOCUMENT FOR TURA REPORTING AND PLANNING FOR CERTAIN METALS AND METAL ALLOYS**

An alloy is a mixture of two or more metals or one or more metals and a nonmetal, as in carbon steel.

Effective reporting year 1995, the TURA Administrative Council delisted certain metals when present in a solid or molten alloy, but not including aerosols. The metals are:

Copper  
Nickel  
Chromium  
Cobalt  
Manganese

Effective reporting year 1998, the TURA Administrative Council delisted silver-copper mixture when present in an alloy form, but not including aerosols.

The established definition of an “alloy” requires that metals mixed with the primary metal must be intentionally added to improve its properties. A metallic substance that is pure or contains other metals as impurities is not considered an alloy. Consequently, copper and silver that is pure or that contains small amounts of impurities were not covered by the two Administrative Council delistings described above.

Effective reporting year 1999, however, the Administrative Council delisted pure (i.e., zero valence) copper and pure silver (including forms containing impurities), but not including aerosols.

The delistings for all the metals described above **DO NOT** extend to aerosols, dissolved metals, metal compounds, or metals that are not zero valence throughout the entire production process. Note that aerosols are metal particles that are less than 50 microns in diameter.

These metals have not been delisted from the EPCRA Toxics Release Inventory (TRI) List. Although delisting by the TURA Administrative Council means that no Form S need be submitted, the federal Form R is still required. The Form R submitted to DEP should be identified as “federal only.”

### **Guidance**

Questions have been raised regarding implementation of these delistings. This guidance has been produced to assist the regulated community in complying with TURA. If you have any remaining questions after reading this document, please contact the Department of Environmental Protection for compliance assistance or the Office of Technical Assistance for further information.

The delisted metals are copper, nickel, chromium, cobalt, manganese and silver. Some of the processes in which those metals might be used are described below with specific guidance.

- ❑ Etching processes – When a metal is removed from metal stock through chemical processing, the resultant metal salt is reportable if it is produced in threshold quantities. (In this case, the metal salt is “coincidentally manufactured.”) The 25,000-pound threshold would apply if the metal salt were the only reportable chemical; the threshold drops to 10,000 pounds if a facility is using other reportable chemicals. It should be noted that the entire weight of the metal salt is considered when determining whether a threshold has been met, and not just the amount of the metal in the salt. As for the stock itself, any delisted metals contained in it are not reportable.
- ❑ Electropolishing operations - The metal salts in solution are reportable as “coincidentally manufactured” if they are produced in threshold quantities. Any delisted metals contained in the stock are not reportable.

- ❑ Grinding Operations - The delisted metals are not exempt from reporting when contained in aerosols, i.e., particles less than 50 microns in diameter (in this case, the metal is reported as “processed”). These metals are reportable if they are present in threshold quantities. When determining whether the reporting threshold has been exceeded, only the weight of the listed metal in the aerosol is considered, and not the total weight of the aerosol. Any delisted metals contained in the stock are not reportable.
- ❑ Multiple processes - In production units with multiple processes, certain individual processes may produce metal aerosols or metal salts in solution. Those aerosols and metal salts in solution would be reportable if produced in threshold quantities, as described above.
- ❑ Alloys in powdered form - If a metal is used in the powdered form, the facility will need to perform a particle size analysis to determine the amount of material less than 50 microns in size. If threshold quantities are produced, the metals are reportable if they are present in particles less than 50 microns in size. When determining whether the reporting threshold has been exceeded, only the weight of the listed metal is considered, and not the total weight of particles.

### **Relationship Between the Metal Delistings and DEP’s “Expanded Article” Exemption**

In 1994, DEP adopted a policy that broadened the article exemption for state reporting purposes. Under the EPCRA article exemption, listed chemicals in an “article” are exempt if the item meets certain criteria, including the requirement that the article must retain its initial thickness or diameter. (See page 4 of this guidance for more information on the article exemption.)

DEP’s “expanded article exemption” was designed primarily to provide some reporting relief for firms otherwise ineligible for the exemption because they changed the shape of the article. Firms that draw wire are one example.

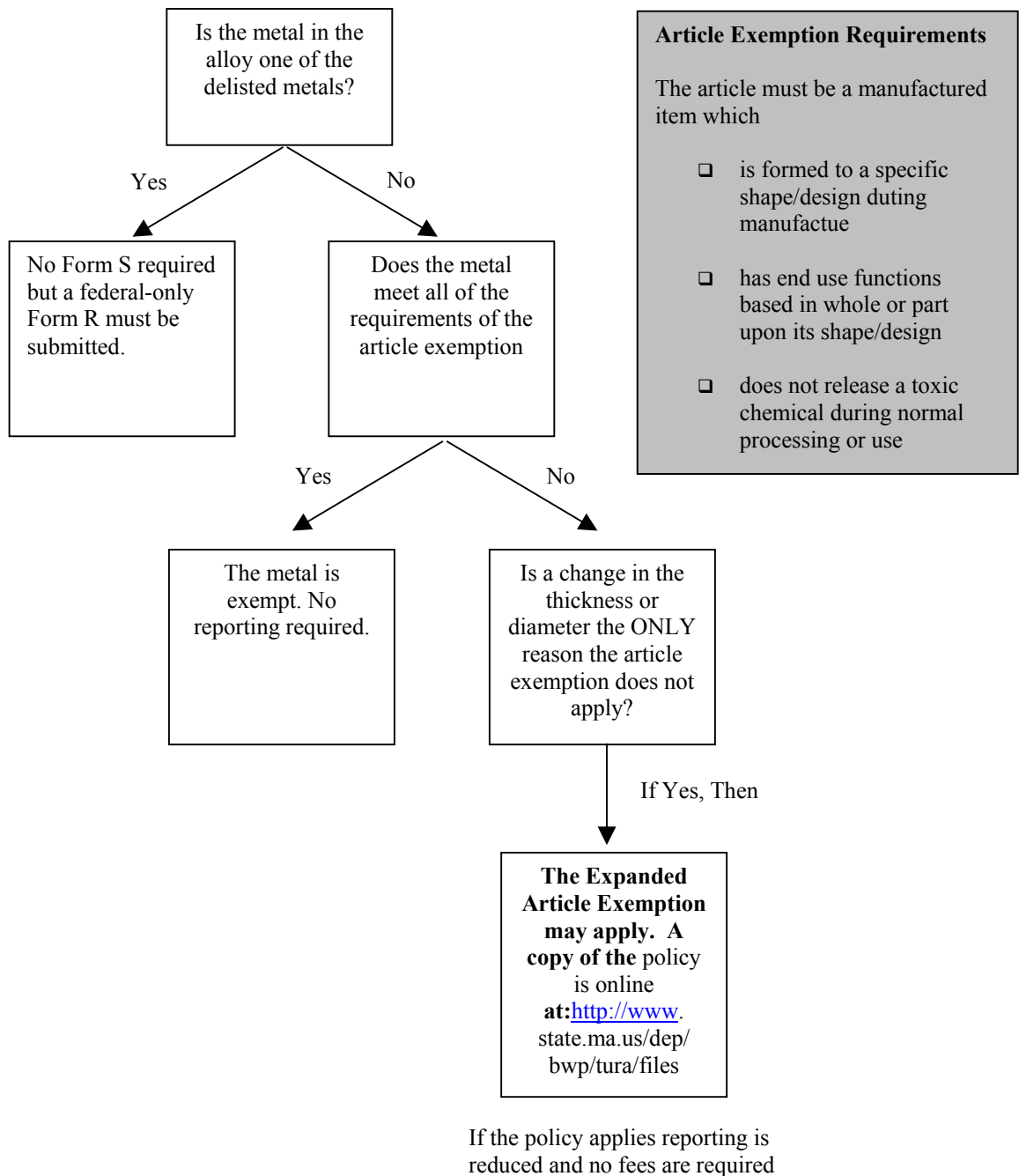
DEP’s expanded exemption applies to copper and its alloys, as well as steels including stainless steel. It excludes lead.

The policy is still in effect but the Administrative Council metal delistings apply to many of the metals which might be covered by the policy. Depending upon the circumstances, the expanded article exemption could be applicable where a metal fails to meet all the conditions of the delistings.

**Example:** The metal delisting applies to copper, nickel, chromium, cobalt, manganese and silver. Some stainless steels contain vanadium, which has not been delisted. A firm using such a steel with reportable quantities of vanadium may wish to consult **BWP-94-014 Policy for TURA Reporting and Planning for Certain Metalworking Operations**.

A copy of the policy and more information on the requirements may be obtained on the web at [www.mass.gov/dep/bwp/dhm/tura/](http://www.mass.gov/dep/bwp/dhm/tura/) or by calling (617) 292-5982.

**Applying the standard article exemption with the “expanded Article exemption”**





## **Appendix G**

### **INTEGRAL RECYCLING GUIDANCE -UNDER THE TOXICS USE REDUCTION ACT (M.G.L.C 21I)**

#### **Introduction**

The Toxics Use Reduction Act (TURA) identifies six (6) techniques which constitute toxics use reduction. The sixth technique is “recycling, reuse or extended use of toxics by using equipment or methods which become an integral part of the production unit of concern, including but not limited to filtration and other closed loop methods.” TURA also states, in part, that “toxics use reduction shall not include... off-site or out-of-production unit waste recycling.” This guidance provides detail on what types of activities are considered “integral recycling” under TURA.

This Appendix also provides general guidance on how each activity is regulated under DEP’s hazardous waste regulations (310 CMR 30.000). The reader must refer to the specific hazardous waste regulations, separate from this TURA guidance, to assure operational compliance with hazardous waste requirements. Critical terms such as “integral,” “production process,” “closed loop,” “totally enclosed,” and others are used differently under different statutes. As such, people must be careful to consider differing requirements to avoid non-compliance problems. Companies should check the regulations themselves or contact DEP at 617-292-5982 for further compliance assistance, if needed.

Should this integral recycling guidance result in significant reductions in your 2002 facility-wide use or byproduct figures, please contact DEP at 617-292-5982. Such significant changes in reporting can skew TURA trend data analysis and your notification to DEP will allow us to adjust our figures to prevent over counting of actual reductions.

#### **DEFINITION**

##### **Activities Considered “Integral Recycling” Under This Guidance**

- ❑ In order for an activity to qualify as “integral recycling” the material must be recycled or reused, not treated. From the TURA perspective, this is important because the statutory language refers to “recycling, reuse or extended use of toxics...” and also because the statutory definition of toxics use reduction specifically excludes anything that is, or that promotes “end-of-pipe treatment.”

If the recycling equipment and piping are permanently connected to a single production unit, the operation is integral. Also, if the recycling equipment is connected via detachable\* hoses to a single production unit, the operation is integral.

- ❑ Detachable\*, portable recycling equipment, directly connected to the production unit while the recycling equipment is in operation, is considered integral. There must be a sealed connection while the unit is in operation.
- ❑ If a manufacturing process includes a directly connected holding tank as part of its production unit, and the recycling unit is directly connected to the tank, this qualifies as integral recycling under this policy.

\* Whenever detachable pipes are used in conjunction with a recycling unit, a written spill prevention plan must be prepared and kept on file to minimize worker exposure and to prevent spills and leaks when connecting, disconnecting, and operating the recycling unit. This spill prevention plan minimizes any increased risk of worker exposures that may arise from this expanded definition of integral recycling under TURA. TURA filers who do not wish to prepare and keep on file this spill contingency plan

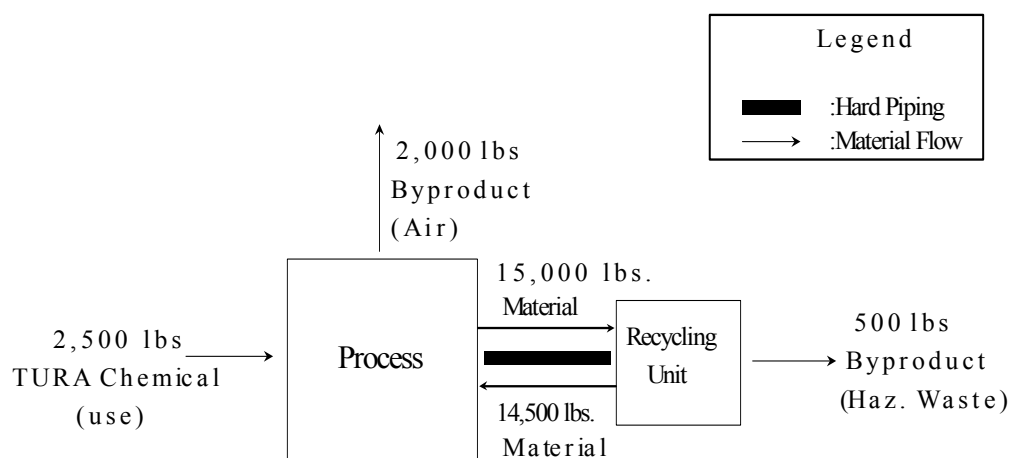
should consider the recycling unit (connected via detachable hoses) non-integral under TURA and report accordingly.

## INTEGRAL RECYCLING EXAMPLES

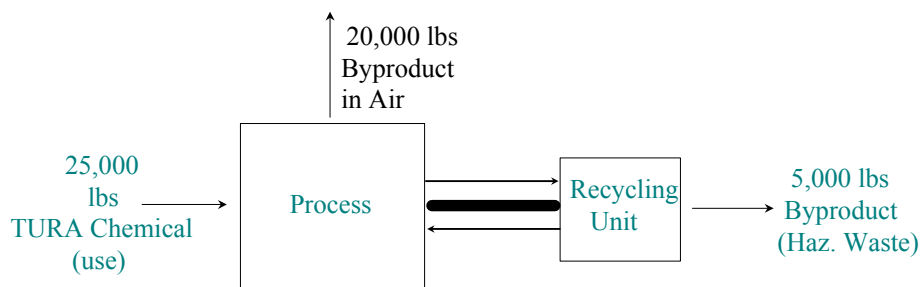
### ✓ Example: 1

A recycling unit which is hard-piped to the process qualifies as integral. The recycling unit is totally enclosed during operation. (Totally enclosed recycling units are units that have been designed, constructed, and operated to prevent spills, leaks or emissions of hazardous materials to the workplace and environment.)

**A. This diagram illustrates the materials accounting and quantities generated each time the reportable chemical is an input to this process. (For this example, it occurs ten times each year.)**



**B. This diagram shows quantities reported annually for this chemical which are integrally recycled in this process.**



**Description of example process:** As shown in diagram A, ten times a year 2,500 lbs of virgin chemical is fed into the process to supplement the 14,500 lbs of integrally recycled chemical which is reintroduced to the process on the same schedule. While parts are being processed using each of ten batches of chemical, 2,000 lbs of byproduct is released into the air. When each batch of chemical is spent, it is pumped through the integrally connected recycling unit which produces 500 lbs of byproduct as hazardous waste per batch. The quantities in diagram B show the yearly amounts of byproduct produced and material processed. Because the unit is integrally connected the chemical recycled is not reported as an input to the process, and spent chemical piped to the recycling unit is not considered byproduct. If any of the recycled solvent can not be used in the process, and is shipped

### ✓ Example: 1 Con't

off-site for reuse without any treatment or recovery, it would be considered byproduct as product and reported in Section 1 item g. of the Form S "Shipped in or as Product." (See section on Byproduct as Product, p.G-6.)

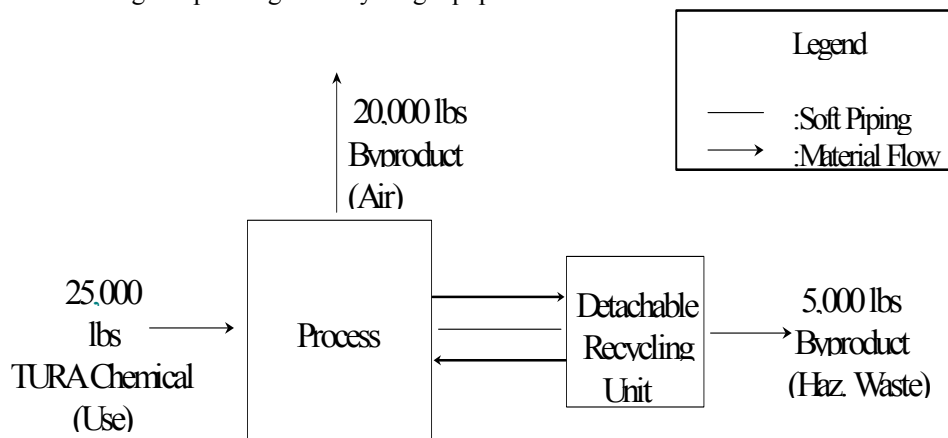
For this example of Integral Recycling, the Form S, Section 1 would be filled out as follows:

c. Manufactured:	0	d. Processed:	0
e. Otherwise Used:	<b>25000</b>	f. Generated as Byproduct:	<b>25000</b>
g. Shipped in or as Product:	0*		

*\* If any integrally recycled material is shipped as product (byproduct as product), item g. would reflect that quantity.*

### ✓ Example: 2

To qualify as integral recycling, the portable recycling unit must be connected while the recycling unit is in operation via detachable couplings that are appropriate for such use and perform similarly to hard piping. The recycling unit is totally enclosed during operation. A written spill prevention plan must be developed to minimize risk of worker exposure and to prevent spills or leaks when connecting and disconnecting or operating the recycling equipment.



**Description of example process:** The quantities in the diagram show the yearly amounts of byproduct produced and material processed. Because the unit is integrally connected, the recycled chemical is not reported as an input to the process, and spent chemical piped to the recycling unit is not considered byproduct. If any of the recycled solvent can not be used in the process, and is shipped off-site for reuse without any treatment or recovery, it would be considered byproduct as product and reported in section 1.2e of the Form S "Shipped in or as Product." (See section on Byproduct as Product, p.G-6.)

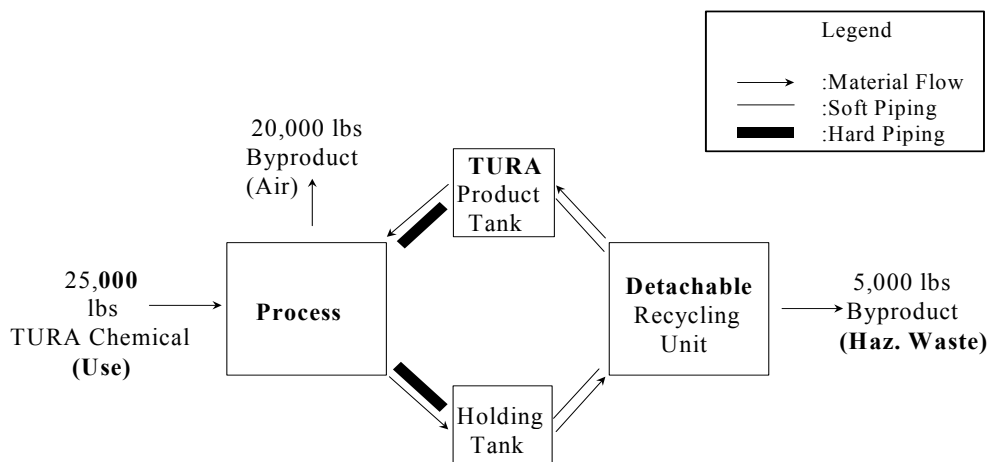
For this example of Integral Recycling, the Form S Section 1 would be filled out as follows:

c. Manufactured:	0	d. Processed:	0
e. Otherwise Used:	<b>25000</b>	f. Generated as Byproduct:	<b>25000</b>
g. Shipped in or as Product:	0*		

*\* If any integrally recycled material is shipped as product (byproduct as product), item g. would reflect that quantity.*

### ✓ Example: 3

A recycling process which utilizes a holding tank, piped to the process, to store spent chemicals which are then recycled via either a permanent or detachable recycling unit, qualifies as integral. The recycling unit must be connected to the holding tank while the unit is in operation. The unit must also be totally enclosed while in operation (as explained in example 1, p.G-2). A written spill prevention plan must be developed to minimize risk of worker exposure, to prevent spills or leaks when connecting and disconnecting or operating the recycling equipment.



**Description of sample process:** The quantities in the diagram show the yearly amounts of byproduct produced and material processed. Because the unit is integrally connected, the recycled chemical is not reported as an input to the process and spent chemical piped to the recycling unit, is not considered byproduct. If any of the recycled solvent can not be used in the process, and is shipped off-site for reuse without any treatment or recovery, it would be considered byproduct as product and reported in Section 1 item g. of the Form S “Shipped in or as Product.” (See section on Byproduct as Product, p.G-6.)

For this example of Integral Recycling, the Form S, Section 1 would be filled out as follows:

c. Manufactured:	0	d. Processed:	0
e. Otherwise Used:	<b>25000</b>	f. Generated as Byproduct:	<b>25000</b>
g. Shipped in or as Product:	0*		

*\* If any integrally recycled material is shipped as product (byproduct as product), Section 1 item g. would reflect that quantity.*

### BYPRODUCT AS PRODUCT

A byproduct that is product means a byproduct that is used as a raw material without treatment or processing. If a byproduct is treated before it is used as a raw material, then it is not a product. For TURA purposes, byproduct as product should be listed as a product of the production unit. For example, some recycled paints or solvents can be sold to buyers who can use them as they are. While these would not be counted as byproducts, they would need to be counted in the amount of the chemical shipped off-site as product.

## BYPRODUCT AS PRODUCT REPORTING UNDER TURA

Chemical amounts being reported as byproduct as product must be listed in the Form S cover sheet in section 4 as a second product for that production unit. Therefore, at least two products will be listed in any production unit that produces byproduct as product.

Are all chemicals only used to treat wastewater? Yes ☐ No ☒ (if yes, then there are no production units associated with this facility).

01

a. Production Unit #

b. Describe the Process:

Degreasing metal parts

is this production unit IN USE for the reporting year of this submittal?

☐ yes ☐ no

c. Describe the Product:

Cleaned metal parts and recycled solvent

Enter up to 4 four-digit SIC Codes that best describe the Product from this Production Unit:

3449

d. SIC Code

e. SIC Code

f. SIC Code

g. SIC Code

h. Check the appropriate description for the unit of product:

☐ area ☐ dollar ☐ hours ☐ kilowatt ☒ length ☐ N/A ☐ number ☐ volume ☐ weight

01

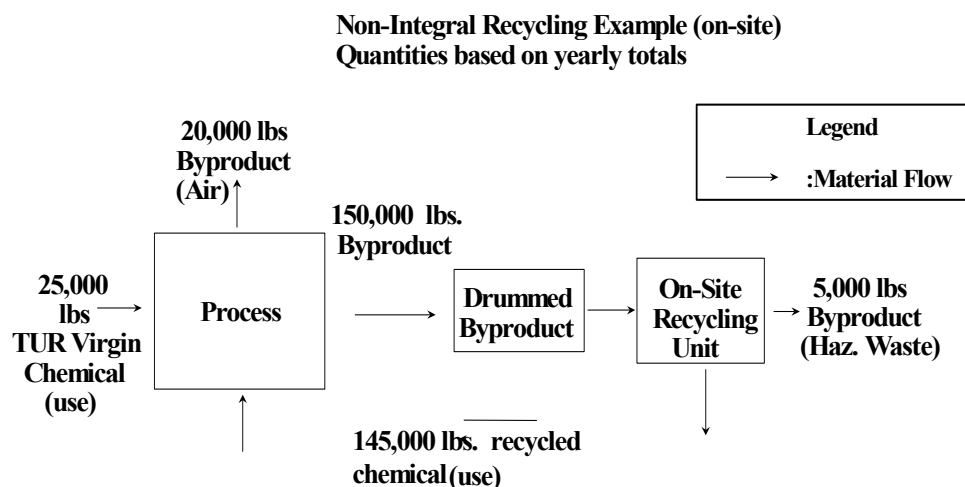
## NON-INTEGRAL RECYCLING (ON-SITE)

Activities where spent material is removed from the process and transferred into barrels or other containers are not considered integral under this policy. To be considered integral, spent material from the production process must be pumped directly into the recycling unit or into a directly connected holding tank, and then to a directly connected recycling unit.

### ✓ Example: 4

**Non-integral, On-Site Recycling Reporting:** Many companies have non-integral recycling operations on-site. Their processes include drumming and transporting the material to a different location in the plant at some point during the operation. Although these recycling processes are not considered “integral recycling,” TURA and this guidance recognize on-site, non-integral recycling as follows: Companies practicing on-site, non-integral recycling are required to count the recycled chemical as byproduct each time it exits the production unit. Additionally, each time the recycled material is re-introduced as an input to the production unit, it should be added to chemical use quantities at the production unit level, but not to the facility-wide use levels. Therefore, any type of on-site recycling is not counted towards facility-wide use of the chemical, and will result in a reduction in the facility-wide total usage number.

### ✓ Example: 4 Con't



**Description of Sample Process:** Each year, 25,000 lbs of virgin chemical plus 145,000 lbs of recycled chemical are added to the process (inputs). Each year 20,000 lbs of byproduct are released to the air and 150,000 lbs of spent chemical is drummed and brought to the on-site recycling unit. The recycling unit generates 5,000 lbs of hazardous waste. The quantities in the diagram show the yearly amounts of byproduct produced and materials processed. Because this is on-site non-integral recycling, the 145,000 lbs of recycled chemical is not counted towards facility-wide use, but is counted toward chemical use at the production unit level.

For this example of a company performing Non-Integral On-Site Recycling, the Form S, Section 1, would be filled out as follows:

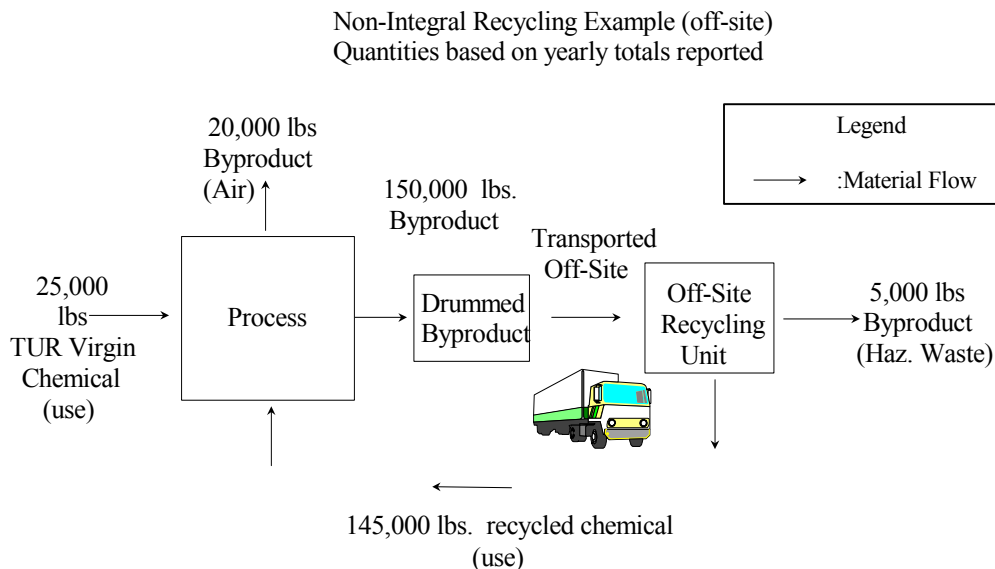
- |                              |       |                            |        |
|------------------------------|-------|----------------------------|--------|
| c. Manufactured:             | 0     | d. Processed:              | 0      |
| e. Otherwise Used:           | 25000 | f. Generated as Byproduct: | 175000 |
| g. Shipped in or as Product: | 0*    |                            |        |

*This example, when compared to the non-integral off-site recycling example below, demonstrates how facility-wide input numbers are minimized with non-integral, on-site recycling. It should be noted on the Form S, in Section 2, that on-site recycling has affected the materials balance for this chemical.*

### ✓ Example: 5

**Non-Integral Off-Site Recycling Reporting:** Activities where materials are sent off-site for recycling are not considered integral under this guidance. Materials recycled off-site and re-introduced into the process, must be counted as byproduct and use both at the facility-wide and production unit levels. This can add significantly to the amount of chemical brought on-site and reported as facility-wide chemical use.

## ✓ Example: 5 Cont



**Description of Example Process:** Each year, 25,000 lbs of virgin solvent plus 145,000 lbs of recycled solvent are added to the process (inputs). Each year, 20,000 lbs of byproduct are released to the air and 150,000 lbs spent chemical is drummed and shipped off-site to a company which recycles spent solvent. This off-site recycling unit generates 5,000 lbs of hazardous waste. The quantities in the diagram show the yearly amounts of byproduct produced and material processed. Because of this off-site non-integral recycling, the recycled chemical, as well as the virgin chemical, must be counted as inputs to the process. Additionally, the spent chemical, as well as the byproduct emitted to the air, must be counted as byproduct. The 5,000 lbs of hazardous waste byproduct is neither generated nor reported by this facility.

For this example of a company performing Non-Integral Off-Site Recycling, the Form S, Section 1, would be filled out as follows:

c. Manufactured:	0	d. Processed:	0
e. Otherwise Used:	<b>170000</b>	f. Generated as Byproduct:	<b>170000</b>
g. Shipped in or as Product:	0*		

## HAZARDOUS WASTE SPECIFIC REQUIREMENTS

### ✓ Example 1: Integral Recycling

- The recycling unit is integral to the process, and therefore exempt from 310 CMR 30.000.
- The recycling unit does not need a recycling permit.
- The byproduct generated from the recycling unit is managed as:
  1. Hazardous waste, and as such, counts towards hazardous waste generator status  
or
  2. Class A regulated recyclable material (notification “permit” required, 310 CMR 30.212)

---

**✓ Example 2: Integral Recycling with Portable Recycling Unit**

---

- The recycling unit is integral to the process, and therefore exempt from 310 CMR 30.000.
  - The recycling unit does not need a recycling permit.
  - The byproduct generated from the recycling unit is managed as:
    1. Hazardous waste, and as such, counts towards hazardous waste generator status
    - or
    2. Class A regulated recyclable material (notification “permit” required, 310 CMR 30.212)
- 

---

**✓ Example 3: Integral Recycling Incorporating Holding Tank**

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- The holding tank is regulated as a hazardous waste accumulation container, subject to generator standards for tanks (310 CMR 30.205(19)).
  - The facility’s generator status calculation includes the amount fed into the holding tank.
  - The recycling unit is regulated as a hazardous waste recycling unit, and therefore needs a Class A or Class B (4) recycling permit (310 CMR 30.212 or 30.213(4))
- 

---

**✓ Example 4: On-Site Non-Integral Recycling**

---

- Hazardous waste regulations apply to the drummed byproduct.
  - Rate of generation includes the amount of byproduct drummed.
  - Hazardous waste recycling permit is required.
- 

---

**✓ Example 5: Off-Site Non-Integral Recycling**

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- Hazardous waste regulations apply to the drummed byproduct.
  - Rate of generation includes the amount of byproduct drummed.
  - Hazardous waste recycling permit is required for the generator and the recycling facility.
- 

**ASSOCIATED HAZARDOUS WASTE ISSUES****GENERAL COMPLIANCE ISSUES****RECYCLING VS. TREATMENT**

In order for an activity to qualify as “integral recycling,” the material must be recycled or reused, not treated. From the TURA perspective, this is important because the statutory language refers to “recycling, reuse, or extended use of toxics...” and also because the statutory definition of toxics use reduction specifically excludes anything that is, or that promotes, “end-of-pipe treatment.” From the hazardous waste perspective, this is important because treatment activities require licenses under both M.G.L.c. 21C and RCRA.



In order to be consistent with RCRA, the following criteria apply when determining whether an activity constitutes recycling: \*

- ☐ Is the secondary material as effective as the raw material it replaces?
- ☐ Can the secondary material be fed directly into the process or is reclamation required?
- ☐ How much of the secondary material is used as compared to the analogous raw material?
- ☐ Is the secondary material managed in a manner consistent with the raw material?
- ☐ Are the toxic constituents actually necessary to the product or are they just “along for the ride”

\*These criteria are taken from the Federal Register (FR), 53 FR at 522, 52 FR at 17013 and 50 FR at 638.

## **INHERENTLY WASTE-LIKE MATERIAL**

The preceding guidance does not apply to those hazardous wastes listed as F020, F021, F022, F023, F026, F028, since those hazardous wastes are inherently waste-like and must be managed as a hazardous waste, pursuant to the definition of hazardous waste contained at 310 CMR 30.000. Furthermore, those inherently waste-like wastestreams cannot be managed as regulated recyclable materials, since there is no exemption provided in 310 CMR 30.200 for those materials. However, there may be circumstances in which the “treatment that is integral...” exemption, cited in 310 CMR 30.000, might apply and in fact, exempt these wastes from hazardous waste regulations.

## **STATE-ONLY VS. EPA**

Concerning other hazardous waste regulatory compliance issues, a TURA filer must keep in mind that since some hazardous waste activities are regulated on a state-only basis, for these wastes, DEP can exert a measure of discretion in policy-making. However, other activities are regulated by both DEP and EPA, and in these circumstances, DEP’s discretion is generally more limited to federal rulings. For example:

- Characteristic sludges and byproducts being reclaimed are regulated by DEP only, and can be managed as hazardous waste, or if being reclaimed, they can be managed as a regulated recyclable material.
- Listed sludges and byproduct being reclaimed are regulated by both EPA and DEP.
- Spent materials being reclaimed on-site are regulated by both EPA and DEP.

## **OTHER STATE AND FEDERAL LAWS OR REGULATIONS**

This guidance does not relieve those responsible for these “recycling activities” from regulatory responsibility contained in any other applicable state or federal laws or regulations. It is incumbent upon the responsible parties to conduct the recycling activities at all times in a manner that is protective of public health, safety, and the environment. To that end, DEP reserves its rights pursuant M.G.L. c. 21C, and M.G.L. c. 21I, to review and evaluate any such activity, on a case-by-case basis, and to require persons or entities managing these activities to comply fully with these laws.

## **Appendix H**

### **GUIDANCE FOR USING THE TURA PRODUCTION PROCESS CODES**

This appendix explains how to use the new standardized codes to describe the production processes included in your production unit(s).

Under TURA, the "production unit" [defined as the process(es) used to produce a product] is the basic unit for reporting and planning. In its regulations, DEP chose to give firms flexibility over how they designate their production units. The rationale was that firms are better suited to determine meaningful product and process combinations than are the regulators.

In TURA reporting, firms list their production units (as they chose to define them) in the Form S Cover Sheet -- identifying the products using one or more four digit SIC codes and describing the processes in their own words. DEP amended the TURA regulations (310 CMR 50.30) to incorporate reporting on production processes using generic codes.

This Appendix describes how and why the codes were developed and then explains how to use them to report information on the Form S Cover Sheet. (See page H-9 for the annotated list of the codes.)

#### **Do the codes require that a firm make changes in the way it defined its production unit?**

No. The coding system is intended to maintain the traditional flexibility firms have been given in grouping products and processes into production units. No change in how firms define their production units is required. The codes are generic enough that most firms should only need a few codes to describe their processes.

#### **Why were these codes developed?**

The standardized process codes were developed, in large part, because of differences in the way similar processes were described by different companies. DEP wants to retain the flexibility given to firms in designating production units. We also need to identify, however, the similarities and differences in processes as part of potentially developing user segment regulations.

The coding system is intended to be used to group the 800+ processes reported each year into broad categories based on similarities and differences in such things as: 1) processes, 2) chemical use, 3) byproduct production, and 4) opportunities for TUR. Alpha-numeric codes have been assigned to each generic category.

### ✓ Example 1: Off-Site Non-Integral Recycling

Each year, a number of firms report deionization of water as a production unit, although the way they describe this process varies. Some refer to it as "D/I Unit," others report only the "regeneration of resins for deionization," etc.

These firms represent a variety of industries, including paper making, pharmaceuticals, electroplating, and co-generation of steam. With the coding system, these firms would uniformly report HH-01 for deionizing water. Once this code is entered into the computer system, DEP can run a report, for example, to determine what TUR techniques have been adopted. Any promising developments in one industry can be researched for potential applicability in other industries.

DEP has, in fact, seen examples where technology transfers look promising. One TURA filer, primarily a chemical manufacturer, uses electroplated copper powders or flakes as a component in its products. That firm has developed an electroplating process that eliminates the need to use cyanide compounds. Although the process is patented, its development in one industry suggests the potential for technology transfer to traditional electroplating firms.

## HOW TO USE THE PRODUCTION PROCESS CODES

Shown below is an excerpt from the **Form S Cover Sheet** showing the top half of Section 4, and calls for identifying the production unit by number, describing the processes involved, describing the product etc.

### Section 4: Facility-Wide Listing of Production Units

A PRODUCTION UNIT is best thought of as the combination of the process (or activities) used to produce a product or service and the product or service. In this section, please identify the PRODUCTION UNITS at the facility, then use the production unit number to report on chemical use in the Form S.

If there has been a substantial change in a PRODUCTION UNIT from the previous reporting year, the PRODUCTION UNIT must be given a new, unique number.

Are all chemicals only used to treat wastewater? Yes ☐ No ☐ (if yes, then there are no production units associated with this facility).

a. Production Unit #

b. Describe the Process:

is this production  
unit IN USE for  
the reporting  
year of this  
submittal?

\_\_\_\_\_

\_\_\_\_\_

c. Describe the Product:

\_\_\_\_\_

\_\_\_\_\_

Enter up to 4 four-digit SIC Codes that best describe the Product from this Production Unit:

d. SIC Code

e. SIC Code

f. SIC Code

g. SIC Code

h. Check the appropriate description for the unit of product:

☐ area ☐ dollar ☐ hours ☐ kilowatt ☐ length ☐ N/A ☐ number ☐ volume ☐ weight

Where the form calls for information concerning the process, a firm should describe any process step that involves a TURA-reported chemical as an input, output or throughput.

A firm need NOT describe a process step that does not involve a TURA chemical. For example, a juice manufacturer would not have to describe mixing as a process step unless a TURA chemical being reported this year was involved. Another manufacturer that mixed food grade acetic acid to produce salad dressing would report the mixing step.

DEP does not expect extremely detailed descriptions of process steps and in the past most firms have described their processes in sufficient detail. More specific descriptions, however, will help DEP identify similarities and differences in the production processes of firms.

### ✓ **Example 2: Off-Site Non-Integral Recycling**

Instead of describing process as "household appliance manufacturing," it would be more helpful if the firm reported "spray coating and assembly of household appliances."

After describing the process, a firm describes the product and enters the four-digit SIC code(s) that best describes that product. Then the unit of product is described in narrative fashion. (See page 15 of the reporting instructions for more detailed information on completing the first part of Section 4.)

### **Using the standardized process codes**


Shown below is that part of Section 4 that calls for firms to enter the appropriate standardized process codes.


#### **Production Process Step Information For This Production Unit**

- i. Enter the production process codes to identify the process steps that involve TURA-reportable chemicals as an input, output or throughput. (See the reporting guidance document for the list of production process codes and instructions on when a given code needs to be listed.)

Process Code	2. Process Code	3. Process Code	4. Process Code
Process Code	6. Process Code	7. Process Code	8. Process Code
Process Code	10. Process Code	11. Process Code	12. Process Code
Process Code	14. Process Code	15. Process Code	16. Process Code
Process Code	18. Process Code	19. Process Code	20. Process Code
Process Code	22. Process Code	23. Process Code	24. Process Code

To complete this part of the cover sheet, firms need to determine which production process code(s) best describe their activities. Note that the production process codes (which begin on page H-9) have been divided into three groups.

 **Note:** There are some firms that may have to review the codes in all the groups. This might occur, for example, with a textile manufacturer that not only dyes fabric but also formulates the dye using a chemical reaction.

 **Note:** The examples and cross - references provided by DEP are based upon the agency's best understanding of production processes as described in TURA reports submitted in previous years.

With the first two groups, a distinction has been drawn between production processes generally used to provide services or make (or process) objects (Group 1) and those processes typically associated with the manufacture of chemicals (Group 2).

Group 1 contains processes that typically are used by firms that primarily make or process objects and goods (or provide services).

Group 2 is designed primarily for use by firms that manufacture or process chemicals. (Mainly firms in SIC code 28, 29, 30, some firms in 33 who recover metals, and chemical distributors.)

Group 3 lists miscellaneous processes that might be used by any firm, regardless of whether services are provided, goods are made, or chemicals produced.

## **DETERMINING WHICH PROCESS GROUP LIST TO USE**

If your firm primarily makes or processes objects (or provides services) look first at the codes in Groups 1 and 3. If there are codes on these lists that adequately describe your processes, you need not evaluate or report any of the chemical process codes in Group 2.<sup>1</sup> Similarly, a firm that primarily manufactures or processes chemicals should first look at Groups 2 and 3 for applicable codes.

If your firm makes and processes objects (or provides services) and there is no code in Group 1 or Group 3 that adequately describes your process, you should then check the Group 2 codes. There may be a generic chemical process code that you can use. If you have questions, you can call DEP at (617) 292-5982.

For many firms, using the process code lists should be straightforward. DEP does recognize, however, that questions and issues of interpretation of the codes may arise. To assist TURA reporters, DEP has included examples or other comments in the attached list of codes.

The examples and cross-references are intended **ONLY** as a guide; each filer is encouraged to use its own best judgment concerning which codes to use. There are, however, some general principles for using the production process codes.

- 1. Each generic process code refers to the specific steps (or unit operations) normally associated with that process.**

### **Example: 3**

A textile manufacturer reports "acid aging," not as a bleaching process but as a step by which dyes are chemically activated. That manufacturer would use the code AA-22 Pigmentation and Dyeing for "acid aging" and all other steps normally associated with dyeing.

---

<sup>1</sup> Many process steps in **Group 1** are themselves chemical reactions. For example, electroplating is an oxidation/reduction reaction. An electroplating firm, however, would enter one of the codes for electroplating (AA-12 or AA-13, for example). The firm would **NOT** enter the **Group 2** code (EE-07) for oxidation/reduction reactions.

2. If a number of process steps can be categorized by one code, that code should be entered **ONLY** once for a given production unit.

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**✓ Example: 4**

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A tool manufacturer cuts, drills, and turns metal to produce hand tools. Generally all those processes can be classed as BB-05 Removal by Mechanical Means (Gross Mass Removal). The code BB-05 would be entered once for all those operations if they all are included in a given production unit. (If the firm had a second production unit with the same three processes, BB-05 would be reported for that production unit as well.)

---

3. Use all the codes that apply.

---

**✓ Example: 5**

---

Electroplating as a generic process includes a product cleaning step. The appropriate code for electroplating should be reported, as well as the appropriate product cleaning code.

---

4. Using the "not otherwise specified" codes.

The production processes are generally placed in subgroups, such as the "Product Molding and Forming" subgroup which includes CC-01 (Casting and Molding), CC-02 (Extrusion and Drawing) CC-03 (Forging), etc.

In some groups, the last code contains the abbreviation N.O.S. for "not otherwise specified." This code should be used for processes that cannot be categorized into one of the codes above it in the subgroup.

### **What do I do if a process is not adequately described by a listed code?**

After looking at Group 1 and 3 codes, a firm that makes or processes objects should next look at the Group 2 chemical reaction codes. If one of those codes apply, use it. If no code truly seems to apply, a firm should use its best judgment to determine which coded process is "most like" the activity being reported.

---

**✓ Example: 6**

---

In the plastics industry there is a relatively new process for forming products known as "pultrusion." With this process, heated plastic is pulled through a die that gives it a specific shape. Assume no existing code is applicable.

Looking over the **Group 1** list, however, the annotations indicate that CC-02: Extrusion and Drawing are processes that give a specific shape to a product by forcing it through a die. "Pultrusion" could be considered "most like" extrusion because a die is used to give shape to a product, even though the plastic is pulled, not pushed.

---

### ✓ Example: 7

A food manufacturer uses a TURA-reportable chemical to "fumigate" its facility. Assume that there is no code that covers this process. There are, however, two processes that are similar: FF-04: Equipment Cleaning (Solvent-Based) (includes sanitizing) and HH-02 Process Water Treatment – Biocides and Disinfection (which includes chlorination).

This firm would have to use its best judgment as to which code "fumigation" is most like. If the fumigant used is a solvent, the equipment cleaning code could be viewed as the most applicable. As this example illustrates, there is not necessarily any one "right" answer for which process code is most like "fumigation."

### Reporting on the chemicals associated with a production unit

Each production unit may be associated with one or more chemicals. In the last part of section 4, firms list the particular chemical(s) that are associated with the given production unit. There is a space for the chemical name and the chemical abstract service (CAS) number. (If there is no CAS number, leave that line blank.) The form then asks whether the chemical listed is associated with all the process steps coded above. If so, check "YES" and no process codes need to be entered for the chemical. If the chemical is associated with some but not all of the processes, the appropriate process codes should be listed.

To illustrate Section 4 reporting, consider a firm that makes jewelry which reports two chemicals: trichloroethane (used to clean jewelry) and ammonia (used in etching).

The cleaning step would be BB-01: Product Cleaning - Solvent-Based, and the etching process would be BB-04: Removal by Chemical Means. This firm would report as shown below.

### ✓ Example 8: Production Units

01

a. Production Unit #

is this production  
unit IN USE for  
the reporting  
year of this  
submittal?

b. Describe the Process:

Cleaning and etching and jewelry

c. Describe the Product:

jewelry

Enter up to 4 four-digit SIC Codes that best describe the Product from this Production Unit:

3961

d. SIC Code

e. SIC Code

f. SIC Code

g. SIC  
Code

h. Check the appropriate description for the unit of product:

☐ area ☐ dollar ☐ hours ☐ kilowatt ☐ length ☐ N/A ☒ number ☐ volume  
☐ weight

### ✓ Example 8: Production Units (Con't)

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**Production Process Step Information For This Production Unit**

i. Enter the production process codes to identify the process steps that involve TURA-reportable chemicals as an input, output or throughput. (See the reporting guidance document for the list of production process codes and instructions on when a given code needs to be listed.)

1. <u>BB01</u> Process Code	2. <u>BB04</u> Process Code	3. <u>          </u> Process Code	4. <u>          </u> Process Code
5. <u>          </u> Process Code	6. <u>          </u> Process Code	7. <u>          </u> Process Code	8. <u>          </u> Process Code
9. <u>          </u> Process Code	10. <u>          </u> Process Code	11. <u>          </u> Process Code	12. <u>          </u> Process Code
13. <u>          </u> Process Code	14. <u>          </u> Process Code	15. <u>          </u> Process Code	16. <u>          </u> Process Code
17. <u>          </u> Process Code	18. <u>          </u> Process Code	19. <u>          </u> Process Code	20. <u>          </u> Process Code
21. <u>          </u> Process Code	22. <u>          </u> Process Code	23. <u>          </u> Process Code	24. <u>          </u> Process Code

List the TURA-reportable chemicals associated with this production unit. If a chemical is associated with ALL the process steps entered in i. above, check ALL. If a chemical is associated with some but not all of the process steps, check the numbers that correspond to the process codes entered in i. above (i.e. box 1 below corresponds to the process code entered in i.1).

j. Production unit number 01  
Prod. Unit #

k. TURA Chemical 71556 TRICHLOROETHANE  
CAS # Chemical Name

Check "All" or the numbers that correspond to the process codes entered in i. All. ☐

1. <input checked="" type="checkbox"/>	2. <input type="checkbox"/>	3. <input type="checkbox"/>	4. <input type="checkbox"/>	5. <input type="checkbox"/>	6. <input type="checkbox"/>	7. <input type="checkbox"/>	8. <input type="checkbox"/>	9. <input type="checkbox"/>	10. <input type="checkbox"/>	11. <input type="checkbox"/>	12. <input type="checkbox"/>
13. <input type="checkbox"/>	14. <input type="checkbox"/>	15. <input type="checkbox"/>	16. <input type="checkbox"/>	17. <input type="checkbox"/>	18. <input type="checkbox"/>	19. <input type="checkbox"/>	20. <input type="checkbox"/>	21. <input type="checkbox"/>	22. <input type="checkbox"/>	23. <input type="checkbox"/>	24. <input type="checkbox"/>

l. TURA Chemical 7664417 AMMONIA  
CAS # Chemical Name

Check "All" or the numbers that correspond to the process codes entered in i. All. ☐

1. <input type="checkbox"/>	2. <input checked="" type="checkbox"/>	3. <input type="checkbox"/>	4. <input type="checkbox"/>	5. <input type="checkbox"/>	6. <input type="checkbox"/>	7. <input type="checkbox"/>	8. <input type="checkbox"/>	9. <input type="checkbox"/>	10. <input type="checkbox"/>	11. <input type="checkbox"/>	12. <input type="checkbox"/>
13. <input type="checkbox"/>	14. <input type="checkbox"/>	15. <input type="checkbox"/>	16. <input type="checkbox"/>	17. <input type="checkbox"/>	18. <input type="checkbox"/>	19. <input type="checkbox"/>	20. <input type="checkbox"/>	21. <input type="checkbox"/>	22. <input type="checkbox"/>	23. <input type="checkbox"/>	24. <input type="checkbox"/>



## TURA PRODUCTION PROCESS CODES

Group 1: Processes Typically Used by Firms that Make and Process Objects or Provide Services

**General Guide to Group 1 Process Codes:** Codes with the prefix "AA" generally refer to processes that add coatings or other matter to a product. The "BB" codes refer to processes that remove matter from a product. The "CC" codes represent processes by which products are given form, shape, physical dimension or other physical properties.

PROCESS and PROCESS CODE	COMMENTS and EXAMPLES
<b>Coating &amp; Painting Processes</b>	Note: firms that use extrusion to coat objects should use the Extruding/Drawing (CC-02)
AA-01: Dip, Flow & Curtain Coating	Example: processes where excess coating material is allowed to flow or drain off
AA-02: Spray Coating	Example: applying coating as a fine mist or spray  Note, however, electrostatic spray coating is included under AA-04 rather than this code
AA-03: Knife/Spread/Roll Coating	Example: using a roller, doctor knife or brush to apply coating
AA-04: Electrostatic Coating Methods	Examples: electrostatic spray coating, electrostatic powder coating, electrocoating
<b>Printing Processes</b>	
AA-05: Letterpress & Flexographic	Example: ink applied to a raised surface of printing plate
AA-06: Lithographic	Example: ink adheres to hydrophobic area/fountain solution adheres to hydrophilic area  Use this code to describe the lithographic processes used in semiconductor and printed circuit board manufacturing
AA-07: Gravure	Example: ink remains in recessed areas of the plate  Includes gravure coating as well as printing
AA-08: Screen Printing	Example: ink forced through open or porous areas of screen or plate
AA-09: Pad Printing	Example: use of a silicone pad to transfer ink from etched/engraved plate to work piece
AA-10: Printing Using Carrier Films or Foils	Examples: hot stamping, in-mold decorating of plastics using films or foils
AA-11: Jet Printing	Example: use of jet(s) to apply text or a pattern

## TURA PRODUCTION PROCESS CODES: Group 1 Codes

PROCESS and PROCESS CODE	COMMENTS and EXAMPLES
<b>Plating Processes</b>	
AA-12: Electroplating (Barrel) AA-13: Electroplating (Rack)	
AA-14: Electroless (Barrel) AA-15: Electroless (Rack)	
AA-16: Mechanical Plating	Example: coating a substrate by tumbling or other mechanical means, e.g., using metal powders
AA-17: Hot Dip Coating (of metal)	Examples: galvanizing, hot tin dipping
<b>Processes that penetrate surface layer</b>	
AA-18: Anodizing, Conversion Coating and Case Hardening (through diffusion)	Examples: anodizing, black oxide conversion, bright dipping, chromating, passivating, phosphating  Includes case hardening through diffusion of substances in the surface layer of metal (e.g., nitriding, nitrocarburizing) For case hardening through the application of energy/heat, see CC-04
AA-19: Deposition	Examples: vacuum metallizing, sputtering, metal (flame) spraying
<b>Processes that add material throughout the mass of a product</b>	
AA-20: Pigmentation/Dyeing	
AA-21: Infiltration/Saturation	Example: kraft paper saturation
AA-22: Impregnation/Implantation	Examples: (from semiconductor industry) - doping (through diffusion), ion implantation, vacuum impregnation
<b>Processes that remove material from product</b>	
<b>Product or Parts Cleaning</b>	Removing dirt, grease and other foreign matter from product  For drying that occurs as part of cleaning use BB-09
BB-01: Solvent-Based	
BB-02: Aqueous	Includes rinsing
BB-03: Mechanical	Examples: sand blasting, cleaning with saw dust
<b>Removal of Mass from Substrate (excluding Cleaning)</b>	
BB-04: Removal by Chemical Means	Includes bleaching (in textiles), chemical stripping, electropolishing, etching, pickling (of metals)

**TURA PRODUCTION PROCESS CODES : Group 1 Codes**

PROCESS and PROCESS CODE	COMMENTS and EXAMPLES
BB-05: Removal by Mechanical Means ( <u>Gross Mass Removal</u> )	Includes processes that remove pieces or chips from product; can include cutting, drilling, lathing, turning
BB-06: Removal by Mechanical Means ( <u>Fine Mass Removal/Size Reduction</u> )	Includes removal methods that produce fine particles/dust; can include abrasive blasting, grinding, milling, polishing (processes that smooth the surface without removing material should be reported as CC-06)
BB-07: Removal by Chemical and Mechanical Means	Example: (in paper making) pulping where mechanical and chemical processes are used
BB-08: Removal by Application of Heat or Energy	Example: laser cutting
BB-09: Drying NOS	Drying not otherwise specified; includes chemical drying
<b>Product Molding/Forming</b>	
CC-01: Casting/Molding	Includes all forms of casting, injection molding, blow molding and similar processes
CC-02: Extrusion/Drawing	Includes processes by which a product is given shape by pushing material through a die or similar device Firms that coat products by extrusion should use this code
CC-03: Forging	
CC-04: Heat Treating NOS	Examples: controlled heating of metal to increase or decrease hardness, improve machinability, relieve stresses etc. (annealing, austempering, tempering and case hardening)
CC-05: Quenching	Example: rapid cooling after heat treating through contact with liquids, gases or solids
CC-06: Forming by Mechanical Means NOS	Forming by Mechanical Means not otherwise specified Examples: bending, cold heading, embossing, rolling
<b>Bonding/Joining</b>	
CC-07: Application of Adhesives	
CC-08: Soldering/Brazing	
CC-09: Welding	
CC-10: Sintering/Powder Metallurgy	
CC-11: Joining through Application of Heat/Energy NOS	Joining through Application of Heat/Energy not otherwise specified
CC-12: Joining through Chemical Means NOS	Joining through Chemical Means not otherwise specified
CC-13: Joining through Mechanical Means NOS	Joining through Mechanical Means not otherwise specified Examples: cladding

## TURA PRODUCTION PROCESS CODES

Group 2: Production Processes Typically Used by Firms that Manufacture and Process Chemicals

PROCESS and PROCESS CODE	COMMENTS and EXAMPLES
<b>SEPARATION/REFINING</b>	
DD-01: Centrifuge/Filtration	
DD-02: Distillation	
DD-03: Drying	
DD-04: Extraction	
DD-05: Precipitation	
DD-06: Refining/Purification	
DD-07: Smelting	
<b>CHEMICAL REACTIONS</b>	
EE-01: Acetalization	
EE-02: Condensation	
EE-03: Curing, Vulcanizing, Cross Linking	
EE-04: Dehydrogenation	
EE-05: Esterification	
EE-06: Hydrogenation	
EE-07: Oxidation/Reduction	
EE-08: pH Adjust	
EE-09: Polymerization	
EE-10: Substitution Reactions	Includes halogenization and chlorination
EE-11: Chemical Reactions NOS	Chemical Reactions not otherwise specified

## TURA PRODUCTION PROCESS CODES

Group 3: Miscellaneous Processes that could be used by any firm

PROCESS and PROCESS CODE	COMMENTS and EXAMPLES
<b>Production Equipment Cleaning</b>	Examples: cleaning of vessels, process lines, printing plates, such devices as spray guns. Also includes descaling of boilers NOTE: Equipment cleaning includes SANITIZING
FF-01: Solvent-Based	
FF-02: Aqueous	Example: use of caustic solutions to clean production equipment
FF-03: Mechanical	Example: use of wiper blades, squeegees
<b>Materials Storage/Handling</b>	
GG-01: Blending, Mixing, Compounding	
GG-02: Particle Size Reduction	Example: grinding mills
GG-03: Packaging/Filling	Examples: bottling liquid products, repackaging
GG-04: Materials Storage/Handling NOS	Materials Storage Handling not otherwise specified Use for storage and handling processes that generate losses such as spills or evaporative losses
<b>Treatment of Process Water</b>	
HH-01: Deionization, Demineralization	Examples: deionization, water softening, including associated process like regeneration of deionization resins
HH-02: Use of Biocides/Disinfection	Examples: water chlorination, use of algacides in cooling towers
HH-03: pH Control of Process Water NOS	pH Control of Process Water (including water in boilers), not otherwise specified
<b>Refrigeration/Temperature Control</b>	
II-01: Refrigeration	
II-02: Heat Exchange Unit	
II-03: Contact Cooling NOS	Contact Cooling not otherwise specified Do not use for quenching. Quenching is CC-05
II-04: Noncontact Cooling NOS	Noncontact Cooling not otherwise specified
<b>Power Generation</b>	
JJ-01: Production of Electricity, Steam, Facility Heat	Applies to processes producing electricity, steam or heat through combustion, includes co-generation  Note: use an FF code for equipment cleaning associated with power production and a HH code for treatment of cooling or boiler water

**TURA PRODUCTION PROCESS CODES:** Alphabetized List of Group 1 and 3 Processes (cross-referenced to recommended codes)

DEP has prepared the following alphabetical listing of some of the more commonly reported production processes with cross-references to the recommended codes in pp. H-15 thru H-23. This appendix explains how to use generic codes to report on production processes in the Form S Cover Sheet. The alphabetical list covers selected processes from Groups 1 and 3 of the codes in pp. H-15 thru H-24.<sup>2</sup>

(Firms that are primarily in the chemical manufacturing SIC codes should also refer to the Group 2 codes on page H-12. The processes associated with chemical manufacturing are not included in this alphabetical list.)

Pages H-15 thru H-24 should also be consulted to confirm the applicability of a code. While the appendix and this list are intended to provide guidance, each filer is encouraged to use his or her best judgment concerning which code(s) adequately describes its processes.

**IMPORTANT NOTE ON THE "MOST LIKE" AND "NOT OTHERWISE SPECIFIED" CODING:**

On pages H-15 thru H-24, the codes are divided into subgroups, such as CC-01 through CC-06 for the product molding and forming codes. Some of the subgroups contain one or more codes containing the abbreviation "NOS" for "not otherwise specified."

Each NOS code is a default code for its group. For example, CC-06 (Forming by Mechanical Means NOS) should be used for any mechanical product forming process other than those specifically-named in its group (e.g., casting, molding, extrusion, etc.) The use of the "most like" coding method (described on p. H-6) should only be used as a last resort, i.e., if there is no applicable code, NOS or otherwise.

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<sup>2</sup> In pp. H-15 thru H-24, the codes are divided into three groups: Group 1 lists processes typically used by firms that primarily make or process objects (or provide services). Group 2 lists processes typically used by firms that are primarily in the chemical manufacturing SIC codes. Group 3 lists miscellaneous processes that might be used by any firm regardless of whether objects or chemicals are made/processed (or services provided).

## ALPHABETICAL LISTING OF PRODUCTION PROCESSES

<u>Process Step</u>	<u>Cross-Reference / Comment</u>
abrasive blasting	<i>see codes listed below under "removal of mass from substrate"</i>
acid aging	see <u>AA-20</u> (Pigmentation/Dyeing), for acid aging as a step in dyeing
annealing	see <u>CC-04</u> (Heat Treating NOS)
anodizing	see <u>AA-18</u> (Anodizing, Conversion Coating & Case Hardening [through diffusion])
application of adhesives	see <u>CC-07</u> (Application of Adhesives - Bonding/Joining)
aqueous-based cleaning	see <u>FF-02</u> (Aqueous Cleaning of Production Equipment) of production equipment
aqueous-based cleaning	see <u>BB-02</u> (Aqueous Cleaning of Product or Parts) of work product
austempering	see <u>CC-04</u> (Heat Treating NOS)
bending	see <u>CC-06</u> (Forming by Mechanical Means NOS)
black oxide	see <u>AA-18</u> (Anodizing, Conversion Coating & Case Hardening conversion coating [through diffusion])
blanking	<i>see codes listed below under "removal of mass from substrate"</i>
bleaching	see <u>BB-04</u> (Removal by Chemical Means)
blending	see <u>GG-01</u> (Blending, Mixing, Compounding)
blow molding	see <u>CC-01</u> (Casting/Molding)
bonding/joining	see as appropriate: <u>CC-07</u> (Application of Adhesives) <u>CC-08</u> (Soldering/Brazing) <u>CC-09</u> (Welding) <u>CC-10</u> (Sintering/Powder Metallurgy) <u>CC-11</u> (Joining through Application of Heat/Energy NOS) <u>CC-12</u> (Joining through Chemical Means NOS) <u>CC-13</u> (Joining through Mechanical Means NOS)
boring	<i>see codes listed below under "removal of mass from substrate"</i>
bottling liquid products	see <u>GG-03</u> (Packaging/Filling)
brazing	see <u>CC-08</u> (Soldering/Brazing)

bright dipping	see <a href="#">AA-18</a> (Anodizing, Conversion Coating & Case Hardening [through diffusion]) if bright dipping is intended to alter the chemical structure of the workpiece's surface  see <a href="#">BB-04</a> (Removal by Chemical Means) if bright dipping is intended to remove mass from the workpiece
broaching	<i>see codes listed below under "removal of mass from substrate"</i>
brush-on coating	see <a href="#">AA-03</a> (Knife/Spread/Roll Coating)
buffing	see as appropriate:  <a href="#">CC-06</a> (Forming by Mechanical Means NOS), if the process is <u>not</u> intended to remove material from the work piece  <i>codes listed below under "removal of mass from substrate,"</i> if the process is intended to remove material from the work piece
burnishing	see as appropriate:  <a href="#">CC-06</a> (Forming by Mechanical Means NOS), if the process is <u>not</u> intended to remove material from the work piece  <i>codes listed below under "removal of mass from substrate,"</i> if the process is intended to remove material from the work piece
calendering	see <a href="#">CC-06</a> (Forming by Mechanical Means NOS)
case hardening	see <a href="#">AA-18</a> (Anodizing, Conversion Coating & Case Hardening [through diffusion]), includes processes such as nitriding
case hardening by heat treating	see <a href="#">CC-04</a> (Heat Treating NOS)
casting	see <a href="#">CC-01</a> (Casting/Molding)
chemical drying	see <a href="#">BB-09</a> (Drying NOS), if chemical drying refers, for example, to the use solvents for drying a work product  see <a href="#">DD-03</a> (Drying) for chemical manufacturers that dry chemicals
chemical stripping	see <a href="#">BB-04</a> (Removal by Chemical)
chromating	see <a href="#">AA-18</a> (Anodizing, Conversion Coating & Case Hardening [through diffusion])




cladding	see <u>CC-13</u> (Joining through Mechanical Means (NOS)) cleaning of production equipment see as appropriate:  <u>FF-01</u> (Solvent-Based Cleaning of Production Equipment)  <u>FF-02</u> (Aqueous Cleaning of Production Equipment) <u>FF-03</u> (Mechanical Cleaning of Production Equipment)  cleaning of work product see as appropriate:  <u>BB-01</u> (Solvent-Based Cleaning of Product or Parts) <u>BB-02</u> (Aqueous Cleaning of Product or Parts) <u>BB-03</u> (Mechanical Cleaning of Product or Parts)
co-extrusion	see <u>CC-02</u> (Extrusion/Drawing)
co-generation	see <u>JJ-01</u> (Production of Electricity, Steam, Facility Heat)
cold heading	see <u>CC-06</u> (Forming by Mechanical Means NOS)
compounding	see <u>GG-01</u> (Blending, Mixing, Compounding)
contact cooling	see <u>II-03</u> (Contact Cooling NOS) or quenching, however, use CC-05 (Quenching)
conversion coating	see <u>AA-18</u> (Anodizing, Conversion Coating & Case Hardening [through diffusion])
conveyorized degreasing	<i>see codes listed above under "cleaning of work product"</i>
crystal growth	see <u>AA-19</u> (Deposition)
curtain coating	see <u>AA-01</u> (Dip, Flow & Curtain Coating)
cutting	<i>see codes listed below under "removal of mass from substrate"</i>
deburring	<i>see codes listed below under "removal of mass from substrate"</i>
degreasing	<i>see codes listed above under "cleaning of work product"</i>
deionization	see <u>HH-01</u> (Deionization, Demineralization), includes the regeneration of deionization resins (of process water)
demineralization	see <u>HH-01</u> (Deionization, Demineralization)
deposition	see <u>AA-19</u> (Deposition) use this code for processes that in deposit thin films (usually of metal) and for crystal growth (includes metal [flame] spraying, sputtering, vacuum metallizing)
descaling of boilers	<i>see codes listed above under "cleaning of production equipment"</i>
descaling of work product	<i>see codes listed below under "removal of mass from substrate"</i>

desmutting	<i>see codes listed below under "removal of mass from substrate"</i>
dip coating	see <a href="#">AA-01</a> (Dip, Flow & Curtain Coating)
disinfection of process water	see <a href="#">HH-02</a> (Treatment of Process Water: Use of Biocides/Disinfection)
doping (through diffusion)	see <a href="#">AA-22</a> (Impregnation/Implantation)
drawing	see <a href="#">CC-02</a> (Extrusion/Drawing)
drilling	<i>see codes listed below under "removal of mass from substrate"</i>
dry cleaning (of clothes)	<i>see codes listed above under "cleaning of work product"</i>
drying (of work product)	see <a href="#">BB-09</a> (Drying NOS)
dyeing	see <a href="#">AA-20</a> (Pigmentation/Dyeing)
electric power generation	see <a href="#">JJ-01</a> (Production of Electricity, Steam, Facility Heat)
electrocoating	see <a href="#">AA-04</a> (Electrostatic Coating Methods)
electroless plating (barrel)	see <a href="#">AA-14</a> (Electroless Plating [Barrel])
electroless plating (rack)	see <a href="#">AA-15</a> (Electroless Plating [Rack])
electroplating (barrel)	see <a href="#">AA-12</a> (Electroplating [Barrel])
electroplating (rack)	see <a href="#">AA-13</a> (Electroplating [Rack])
electropolishing	see <a href="#">BB-04</a> (Removal by Chemical Means)
electrostatic coating methods	see <a href="#">AA-04</a> (Electrostatic Coating Methods)
electrostatic powder coating	see <a href="#">AA-04</a> (Electrostatic Coating Methods)
electrostatic spray coating	see <a href="#">AA-04</a> (Electrostatic Coating Methods)
embossing	see <a href="#">CC-06</a> (Forming by Mechanical Means NOS)
equipment cleaning	<i>see codes listed above under "cleaning of production equipment"</i>
etching	see <a href="#">BB-04</a> (Removal by Chemical Means)
extrusion	see <a href="#">CC-02</a> (Extrusion/Drawing)
filling	see <a href="#">GG-03</a> (Packaging/Filling)
flame and arc cutting	see <a href="#">BB-08</a> (Removal by Application of Heat or Energy)
flexographic printing	see <a href="#">AA-05</a> (Letterpress & Flexographic Printing)

flow coating	see <a href="#">AA-01</a> (Dip, Flow & Curtain Coating)
foam molding	see <a href="#">CC-01</a> (Casting/Molding)
forging	see <a href="#">CC-03</a> (Forging)
forming by mechanical means NOS	see <a href="#">CC-06</a> (Forming by Mechanical Means NOS) mechanical forming processe other than casting/molding (CC-01), extrusion/drawing (CC-02) or forging (CC-03)
galvanizing	see as appropriate:  <a href="#">AA-17</a> (Hot Dip Coating of Metal)  <a href="#">AA-12</a> (Electroplating, Barrel) & <a href="#">AA-13</a> (Electroplating, Rack), if galvanizing is by electroplating
gravure printing	see <a href="#">AA-07</a> (Gravure)
gravure coating	see <a href="#">AA-07</a> (Gravure)
grinding	see as appropriate:  <i>codes listed below under "removal of mass from substrate"</i>  <a href="#">GG-02</a> (Particle Size Reduction) for grinding of chemicals, as in grinding of paint pigments
heat exchange unit	see <a href="#">II-02</a> (Heat Exchange Unit)
heat treating	see <a href="#">CC-04</a> (Heat Treating NOS)
hobbing	<i>see codes listed below under "removal of mass from substrate"</i>
hot dip coating (of metal)	see <a href="#">AA-17</a> (Hot Dip Coating of Metal)
hot stamping	see <a href="#">AA-10</a> (Printing Using Carrier Films or Foils) (printing)
hot tin dipping	see <a href="#">AA-17</a> (Hot Dip Coating of Metal)
implantation	see <a href="#">AA-22</a> (Impregnation/Implantation)
impregnation	see <a href="#">AA-22</a> (Impregnation/Implantation)
in-mold decorating of plastics using films or foils	see <a href="#">AA-10</a> (Printing Using Carrier Films or Foils)
infiltration	see <a href="#">AA-21</a> (Infiltration/Saturation)
injection molding	see <a href="#">CC-01</a> (Casting/Molding)
ion implantation	see <a href="#">AA-22</a> (Impregnation/Implantation)

jet printing	see <a href="#">AA-11</a> (Jet Printing)
knife coating	see <a href="#">AA-03</a> (Knife/Spread/Roll Coating)
knife over roll coating	see <a href="#">AA-03</a> (Knife/Spread/Roll Coating)
kraft paper saturation	see <a href="#">AA-21</a> (Infiltration/Saturation)
laser cutting	see <a href="#">BB-08</a> (Removal by Application of Heat or Energy)
lathing	<i>see codes listed below under "removal of mass from substrate"</i>
letterpress printing	see <a href="#">AA-05</a> (Letterpress & Flexographic Printing)
lithographic printing	see <a href="#">AA-06</a> (Lithographic)
machining	<i>see codes listed below under "removal of mass from substrate"</i>
materials storage/handling	see as appropriate:  <a href="#">GG-01</a> (Blending, Mixing, Compounding) <a href="#">GG-02</a> (Particle Size Reduction) <a href="#">GG-03</a> (Packaging/Filling) <a href="#">GG-04</a> (Materials Storage Handling NOS)
mechanical plating	see <a href="#">AA-16</a> (Mechanical Plating)
metal (flame) spraying	see <a href="#">AA-19</a> (Deposition)
milling <i>substrate"</i>	see as appropriate: <i>codes listed below under "removal of mass from</i>  <a href="#">GG-02</a> (Particle Size Reduction) as in the use of grinding mills
mixing	see <a href="#">GG-01</a> (Blending, Mixing, Compounding)
molding	see <a href="#">CC-01</a> (Casting/Molding)
neutralization	if neutralization is a step in a coded process, use that code for that process, for example, if neutralization is a step in dyeing, the appropriate code would be <a href="#">AA-20</a> (Pigmentation/Dyeing)  if neutralization is used in the manufacture of a chemical, use <a href="#">EE-08</a> (pH Adjust)
nitriding	see <a href="#">AA-18</a> (Anodizing, Conversion Coating & Case Hardening [through diffusion])
nitrocarburizing	see <a href="#">AA-18</a> (Anodizing, Conversion Coating & Case Hardening [through diffusion])
noncontact cooling	see <a href="#">II-04</a> (Noncontact Cooling NOS) (where cooling fluid is kept separate from the production process)
packaging	see <a href="#">GG-03</a> (Packaging/Filling)

pad printing	see <u>AA-09</u> (Pad Printing)
particle size reduction	see <u>GG-02</u> (Particle Size Reduction), for processes such as the grinding of paint pigments
passivating	see <u>AA-18</u> (Anodizing, Conversion Coating & Case Hardening [through diffusion])
pH control	see <u>HH-03</u> (pH Control of Process Water [including water in of process water boilers] NOS)
photolithography	see <u>AA-06</u> (Lithographic)
phosphatizing	see <u>AA-18</u> (Anodizing, Conversion Coating & Case Hardening [through diffusion])
pickling (of metals)	see <u>BB-04</u> (Removal by Chemical Means)
pigmentation	see <u>AA-20</u> (Pigmentation/Dyeing)
polishing	<i>codes listed below under "removal of mass from substrate," if material is removed from work piece</i>
polishing (continued)	<u>CC-06</u> (Forming by Mechanical Means NOS) if material is <u>not</u> removed from work piece
powder metallurgy	see <u>CC-10</u> (Sintering/Powder Metallurgy)
pressure treating (wood)	see <u>AA-22</u> (Impregnation/Implantation)
printing using	see <u>AA-10</u> (Printing Using Carrier or Filmcarrier films or Foils)

 **NOTE:** some mechanical "removal" processes (e.g., polishing) can be used either to remove material or to smooth the surface of a product without removing material. The code for such mechanical surface "smoothing" is CC-06 (Forming by Mechanical Means NOS).

pulping (in paper making)	see as appropriate:  <u>BB-05</u> (Removal by Mechanical Means - Gross Mass Removal) <u>BB-06</u> (Removal by Mechanical Means - Fine Mass Removal) <u>BB-07</u> (Removal by Chemical & Mechanical Means)
punching	<i>see codes listed below under "removal of mass from substrate"</i>
quenching	see <u>CC-05</u> (Quenching)
refrigeration	see <u>II-01</u> (Refrigeration)
regeneration of deionization resins	see <u>HH-01</u> (Deionization, Demineralization)
removal of mass from substrate	refers to processes which can be used to a work product, generally, excluding the removal of dirt or grease cleaning as in removal

The six removal codes are:

BB-04 (Removal by Chemical Means)

BB-05 (Removal by Mechanical Means -- Gross Mass Removal), to be used if process removes pieces or chips

BB-06 (Removal by Mechanical Means -- Fine Mass Removal/ Size Reduction), to be used if process produces fine particles or dust

BB-07 (Removal by Chemical & Mechanical Means)

BB-08 (Removal by Application of Heat or Energy)

BB-09 (Drying NOS) for drying work products

repackaging	see <u>GG-03</u> (Packaging/Filling)
reverse roll coating/printing	see <u>AA-03</u> (Knife/Spread/Roll Coating)
rinsing	see <u>BB-02</u> (Aqueous Cleaning of Product or Parts)
roll coating	see <u>AA-03</u> (Knife/Spread/Roll Coating)
rolling	see <u>CC-06</u> (Forming by Mechanical Means NOS)
rotary screen printing	see <u>AA-08</u> (Screen Printing)
sand blasting	<i>see codes listed above under "removal of mass from substrate"</i>
sanitizing (production equipment)	<i>see codes listed above under "cleaning of production equipment"</i>
saturation	see <u>AA-21</u> (Infiltration/Saturation)
sawing	<i>see codes listed above under "removal of mass from substrate"</i>
semi-aqueous cleaning parts)	see <u>BB-01</u> (Solvent-Based Cleaning of Product or of work product
scouring (textile products)	<i>see codes listed above under "cleaning of work product"</i>
screen printing	see <u>AA-08</u> (Screen Printing)
shearing	<i>see codes listed above under "removal of mass from substrate"</i>
sintering	see <u>CC-10</u> (Sintering/Powder Metallurgy)
soldering	see <u>CC-08</u> (Soldering/Brazing)
solvent-based cleaning equipment Cleaning)	see <u>FF-01</u> (Solvent-Based Production Equipment of production
solvent-based cleaning Parts)	see <u>BB-01</u> (Solvent-Based Cleaning of Product or of work product
solvent drying piece	see <u>BB-09</u> (Drying NOS), for the use solvents to dry a product or work

spray coating coating)	see <u>AA-02</u> (Spray Coating) (does not include electrostatic spray
coating	see <u>AA-04</u> (Electrostatic Coating Methods) for electrostatic spray
spread coating	see <u>AA-03</u> (Knife/Spread/Roll Coating)
sputtering	see <u>AA-19</u> (Deposition)
steam generation via combustion	see <u>JJ-01</u> (Production of Electricity, Steam, Facility Heat)
straightening	see <u>CC-06</u> (Forming by Mechanical Means NOS)
tempering	see <u>CC-04</u> (Heat Treating NOS)
trimming	<i>see codes listed above under "removal of mass from substrate"</i>
tumbling	see as appropriate:  <u>AA-16</u> (Mechanical Plating), if tumbling is used to plate  <i>codes listed above under "removal of mass from substrate," if tumbling is used to remove mass from a work product, such as tumbling to deburr</i>  <u>CC-06</u> (Forming by Mechanical Means NOS), if tumbling is used to smooth a work product without removing mass turning <i>see codes listed above under "removal of mass from substrate"</i>
ultrasonic cleaning of parts	<i>see codes listed above under "cleaning of work product"</i>
use of biocides	see <u>HH-02</u> (Treatment of Process Water: Use of in process water/cooling towers Biocides/Disinfection)
use of squeegees/wiper blades/rags	<i>see codes listed above under "cleaning of production equipment" to clean production equipment</i>
vacuum impregnation	see <u>AA-22</u> (Impregnation/Implantation)
vacuum metallizing	see <u>AA-19</u> (Deposition)
vapor degreasing	<i>see codes listed above under "cleaning of work product"</i>
water deionization	see <u>HH-01</u> (Deionization, Demineralization)
water chlorination	see <u>HH-02</u> (Treatment of Process Water: Use of Biocides/Disinfection)
water softening	see <u>HH-01</u> (Deionization, Demineralization)
welding	see <u>CC-09</u> (Welding)

## **Appendix I**

### **PRODUCTION UNITS**

The Form S contains both facility-wide and process-specific information. Facilities report information on the quantity of chemical used and the amount generated as byproduct (waste) on a facility-wide level. Any progress in reducing byproduct through the implementation of toxics use reduction is measured and reported at the process (or "production unit") level.

A **production unit** is "a process, line, method, activity, or techniques, or a combination or series thereof, used to produce a product or a family of products."

A **product** means "a product, family of products, an intermediate product, a family of intermediate products, or a desired result or family of results."

A **result** is, for example, clean laundry after an industrial cleaning process.

A **family of products** is, for example, three different rubber compounds grouped together as one product.

**Intermediate product** is, for example: A chemical manufacturer produces methanol as an intermediate step in the production of formaldehyde. The methanol can be considered a product.

With these definitions TURA gives facilities flexibility in how they divide their facility into production units:

- A production unit can include all of the processes used to produce an individual item such as a particular shade of paint or a plated knife, or that produce a desired result such as cleaned out lines and mixing vats.
- Products can be grouped together into a family of products so that, for instance, all of the processes used to create several different shades of paint could be considered one production unit.
- An individual process step such as degreasing coupled with the result of that step (for example, a degreased piece of metal), can be considered a separate production unit.
- Separate process lines that make the same product can be considered as one production unit.

For guidance on factors that should be considered when establishing production units, please refer to DEP's "Guidelines for Classifying Production Units". This can be obtained from DEP-TURA, One Winter Street, 8<sup>th</sup> Floor, Boston, MA 02108-4747, or by calling (617) 292-5982.

In addition to identifying production units, facilities must also establish a "unit of product." There are two basic explanations for a decline in the quantity of chemical generated as byproduct: There could have been a drop in production levels, or, through the implementation of TUR, less byproduct could have been generated per unit of product produced.

In order to distinguish byproduct reductions that occur through declines in production from those that occur because of the implementation of TUR, production level reporting is done on a "per unit of product" basis.

As with production units, facilities are free to select the unit of product. The key to choosing a unit of product is that the measure should be a reliable indicator of changes in production levels. The unit of product should be one that reliably increases or decreases as production goes up or down. The Guidelines for Classifying Production Units discusses considerations for selecting a unit of product.



In most cases, an acceptable choice will be a physical measure such as pounds of ammonia manufactured by the production unit or square yards of printed fabric.

### ✓ Example

Example	Units of Product
No. of Products/year	No. of wood chairs
Square feet/year	square feet of anodized parts
Pounds/year	pounds of formaldehyde produced
Gallons/year	gallons of paint produced

Sometimes, however, it may not be possible to identify a physical measure that reliably reflects outputs. In such a case, a non-physical measure may be used as a way to quantify changes in production. Examples of this may include: hours of operation, labor hours, and dollar sales.

Non-physical measures can be affected by things that have nothing to do with changing levels of production. For instance, dollar sales will be influenced by changes in inflation, or perhaps, by product pricing. Labor hours might be less reliable if there has been a mid-year shift to automation, making output more efficient.

If you chose a non-physical unit of product, you must provide a written explanation as to why a physical measure cannot be used. You must also state how the non-physical measure has been adjusted to accurately reflect production levels rather than changes in costs, prices, inventory, productivity or other factors.

## Appendix J

### **GLOSSARY OF TERMS**

**Alloy**: a substance possessing metallic properties and composed of two or more elements of which at least one must be a metal. The term refers to those cases where there is an intentional addition to a metal for the purpose of improving certain properties.

**Base Year**: the benchmark year from which the facility will measure progress in reducing the byproducts and emissions attributable to the production unit. In each succeeding reporting year the byproducts and emissions attributable to the production unit will be compared to those in the base year, on a per unit of product basis.

**Byproduct**: all nonproduct outputs of toxic or hazardous substances generated by a production unit, prior to handling, transfer, treatment or release.

**Byproduct Reduction Index (BRI)**:  $BRI = 100 \times (A-B) / A$

$A = (\text{Byproduct quantity in the base year}) / (\text{number of units of product produced in the base year})$

$B = (\text{Byproduct quantity in the reporting year}) / (\text{number of units of product produced in the reporting year})$

**CERCLA**: Comprehensive Environmental Response, Compensation, and Liability Act, commonly referred to as "Superfund."

**Emissions Reduction Index(ERI)**:  $ERI = 100 \times (A-B) / A$


$A = (\text{Emissions quantity in the base year}) / (\text{number of units of product produced in the base year})$


$B = (\text{Emissions quantity in the reporting year}) / (\text{number of units of product produced in the reporting year})$

**EPCRA**: Emergency Planning and Community Right to Know Act.

**Facility**: all buildings, equipment, structures, and other stationary items which are located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person, or by any person who controls, is controlled by, or is under common control with such person.

**Full-Time Employee Equivalent**: An FTE is defined as 2,000 work hours per year. The 10 FTE criteria is met if a total of 20,000 hours were worked by all employees (including consultants) whether they worked full or part-time.

 **Note:** Manufacture includes the “coincidental” manufacture of a substance during manufacturing, waste treatment or fuel combustion.

 **Note:** repackaging the chemical is considered processing.

**Included SIC Codes:** This is one of the areas where TURA’s requirements differ from those of EPCRA.

Under TURA, the SIC code criteria is met if **any** of your business activities are conducted in the areas represented by TURA’s longer list of included SIC codes (SIC Codes 10 - 14, 20 – 39, 40, 44-51, 72, 73, 75, and 76.) The TURA list includes manufacturing plus business activities such as transportation, wholesale trade, and business or personal services. For the descriptions of the SIC codes, see Appendix A.

EPCRA reporting is only required of firms that derive more than 50% of their business from **manufacturing** (SIC codes 20-39). This provision does **not** apply to TURA reporting.

**Manufacture:** to produce, prepare, import or compound a toxic or hazardous substance.

**Otherwise Use:** EPA has revised it’s definition of OTHERWISE USE to mean ‘any use of a toxic chemical, including a toxic chemical contained in a mixture or other trade name product or waste, that is not covered in the terms “manufacture” or “process.” Otherwise use of a toxic chemical does not include disposal, stabilization (without subsequent distribution in commerce), or treatment for destruction unless:

- A. The toxic chemical that was disposed, stabilized, or treated for destruction was received from off-site for the purposes of further waste management; or
- B. The toxic chemical that was disposed, stabilized, or treated for destruction was manufactured as a result of waste management activities on materials received from off-site for the purposes of further waste management activities. Relabeling or redistributing of the toxic chemical where no repackaging of the toxic chemical occurs does not constitute otherwise use or processing the toxic chemical.

**Process:** the preparation of a toxic or hazardous substance, including, without limitation, a toxic substance contained in a mixture or trade name product, after its manufacture, for distribution in commerce:

- ☐ in the same form or physical state, or in a different form or physical state from that in which it was received by the toxics user preparing such substance;
- or
- ☐ as part of an article containing the toxic or hazardous substance.

**Product:** a product, a family of products, an intermediate product, family of intermediate products, or a desired result or a family of results. “Product” also means a byproduct that is used as a raw material without treatment.

**Sanitized vs. Unsanitized Reports:** If you make a Trade Secret claim, you must submit two versions of your report -- one that contains the Trade Secret information (**unsanitized**) and one that does not (**sanitized**). In Item g. in Section 1 of the Form S Cover Sheet, indicate whether the version of the report is sanitized or unsanitized.

**Shipped in or as Product:** the quantity of the chemical that leaves the facility as product.



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